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the discoverer of the principle of the barometer. His experiment, made in 1643, showed that the pressure of the atmosphere can support a column of water about thirty-three feet high, or a column of mercury, or of any other liquid, of a length inversely proportional to its specific gravity.

P. 133, l. 35. "The water in the Phial does not descend." This puzzled Boyle and Oldenburg, as it naturally suggested that even in the presence of air the stability of the column of water, or of mercury, etc., in the Torricellian tube may not be due to air-pressure. In reality, however, the two cases are very different. In a vacuum "the water in the phial," or any other liquid under similar conditions, "does not descend" because of the tensile strength of the liquid. See Poynting and Thomson's *Properties of Matter*: "Liquids from which the air has been carefully expelled can sustain a considerable pull without rupture." It has been shown, in fact, that water can sustain a tension of about 72 lb. per square inch without rupture.

LETTER XV

P. 134. This letter was not printed in the *Posthumous Works*. It was discovered by Victor Cousin and published by him, in 1647, in his *Fragments Philosophiques*, vol. iii. The original letter is now in the Sorbonne, and a facsimile of it is in W. Meyer's edition of the extant autograph letters of Spinoza (1903). Sir F. Pollock published a translation of it, on p. 448 of his *Spinoza, His Life and Philosophy*, in 1880.

P. 134, l. 21. Concerning Meyer and De Vries, see *Introduction*, § 6.

P. 135, l. 9. What exactly the passage was to which Spinoza objected is not known, as Meyer omitted it

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from his Preface as it was finally printed, and substituted for it some words very like those which Spinoza suggested in this letter. The Preface concludes as follows : “ Lastly (to bring the preface to an end), we wish the Readers to know that all these treatises are published for no other purpose than that of discovering and spreading the truth, and in order to persuade men to turn to the study of true and genuine Philosophy ” (*The Oldest Biography of Spinoza*, pp. 153 f.). Compare the *Short Treatise* (last Chapter) : “ I would beg of you most earnestly to be very careful about the communication of these things to others. . . . If ever you wish to communicate them to anybody, then let no other aim prompt you except only the happiness of your neighbour ” (pp. 149 f. of my translation).

P. 136, l. 3. The first edition of Spinoza’s *Geometric Version of Descartes’ Principles* (1663) shows clearly that eleven lines of small type were interpolated on pages 76 and 77 after they had been set up.

LETTER XVI

P. 136. This letter is only known from the *Posthumous Works*, the original letter, written in Latin, having been lost.

P. 136, l. 25. “ Forms, qualities and trivial elements.” See Annotations to Letters III, VI and XIV.

P. 138, l. 4. It is interesting to find Oldenburg characterizing the difference between Boyle and Spinoza in terms which might almost serve to distinguish generally English thought from continental thought of the time—the mainly empirical character of the former, and the more speculative tendencies of the latter.

P. 138, l. 19. Concerning Mr. Serrarius, see Annotations to Letter XIV.

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LETTER XVII

P. 138. This letter must have been written in Dutch originally. But the original letter is lost, and the Dutch edition of the *Posthumous Works* gives what seems to be a translation of the letter as it appears in the Latin edition. In the margin of the Dutch edition are the Latin technical terms which are used in the Latin version of this letter. This suggests that the Latin version had probably been made by Spinoza himself, and that the editors therefore treated it as though it had been the original letter.

Concerning P. Balling, see *Introduction*, § 6. He was subjected to violent criticism because of his *Light on the Candlestick* (1662) and some subsequent writings in defence of the Mennonites.

P. 139, l. 24. Did Spinoza re-visit Rhynsburg during the winter 1663-1664? Or is he referring here to the winter 1662-1663? He removed from Rhynsburg to Voorburg in April 1663, according to Letter XIII.

P. 140, l. 30. The last paragraph but one shows an interesting and touching attempt on the part of Spinoza to meet Balling's sentiments as far as was possible consistently with his own philosophy. The remarks about the relations between the states of the body and the states of the soul have reference to the doctrine which Spinoza expresses in *Ethics* II, Proposition XVII.

LETTER XVIII

P. 141. The original letter was in Dutch, and is printed in the Dutch edition of the *Posthumous Works*. The Latin version is a translation of it.

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Concerning Blyenbergh, see *Introduction*, § 7.

P. 141, l. 32. The Treatise referred to is Spinoza's geometric version of Descartes' *Principles of Philosophy*, to which Spinoza appended *Metaphysical Thoughts*. The full title is: *Renati Des Cartes Principiorum Philosophiae Pars I et II. More Geometrico demonstratae per Benedictum de Spinoza Amstelodamensem. Accesserunt ejusdem Cogitata Metaphysica. In quibus difficiliores, quae tam in parte Metaphysices generali, quam speciali occurunt, quaestiones breviter explicantur.* Amstelodami, apud Johannem Riewerts. 1663. 4°.

A Dutch translation, by Pieter Balling, was published in 1664.

P. 143, l. 11. "The promise made in your Book," that is, by Meyer in the Preface to Spinoza's above-mentioned geometric version of Descartes' *Principles*.

P. 143, l. 20. "In several places . . .," namely, in the above *Principles*, Part I, Proposition XII, and in the *Metaphysical Thoughts*, Part II, Chapters VII, X and XI.

P. 144, l. 6. "As you usually assert . . .," namely, in the *Metaphysical Thoughts*, Part I, Chapter III, and Part II, Chapter XI.

P. 144, l. 23. "By saying that evil is something unreal. . . ." See *Metaphysical Thoughts*, Part II, Chapters VII, IX and XI.

P. 144, l. 24. "In which God does not concur." Here and in other places there is an implicit reference to the conception known as *concursus Dei* (also *assistentia Dei*), "the co-operation of God," by which Descartes and the Occasionalists tried to account for the seeming interaction between body and soul, in the execution of one's will, for instance. The conception was also employed by Descartes and others to account for the continuous existence of things.

P. 143, l. 15. "The . . . disease." Was it an epidemic?

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LETTER XIX

P. 146. This letter was written in Dutch. The original was once in the possession of Frans Halma (best known as the translator into Dutch of Bayle's account of Spinoza, given in his famous *Dictionnaire* (1697, etc.)—*Het Leven van B. Spinoza*, etc., 1698), and published by him in the periodical *Boekzaal der Geleerde Werrelt*, in March 1705. But all trace of the original has been lost since then. The Latin version printed in the *Opera Posthuma* appears to have been made by Spinoza himself, and was re-translated into Dutch for the *Nagelate Schriften*. The last paragraph of the letter was omitted from the *Posthumous Works*.

P. 147, l. 3. In order to understand Spinoza's attitude towards the problems discussed in this letter and in Letters XXI and XXIII, it must be borne in mind that Spinoza rejects the ordinary conceptions of reward and punishment, and the closely connected conceptions of merit and demerit as commonly conceived. He thinks always in terms of natural consequences of actions, and of character as expressed in actions. One character is more perfect than another, inasmuch as it has greater powers or capacities, and so embodies more reality. But it is not, therefore, more "meritorious" in the sense of deserving special rewards. Nor does the less perfect character "merit" punishment. Less perfect characters are, indeed, less in harmony with their social environment than are more perfect characters, and society may in self-defence have to eliminate them in some way. But this is not, for Spinoza, a matter of reward and punishment. Spinoza, in short, looks at the whole problem like a doctor rather than like a policeman.

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P. 148, l. 7. "Everyone observes with admiration and delight in animals. . . ." This passage throws some light on what Colerus (in his *Life of Spinoza*, Chapter IX) describes as a pastime of the philosopher, namely, to watch the activities of spiders and their capture of flies.

P. 151, l. 12. "The pious . . . become more perfect by their service." Compare *Short Treatise*, II, xviii, end.

P. 151, l. 22. "The language in which I was brought up," namely, Spanish. Spinoza did not feel quite at home with Dutch as a medium of literary expression. But one feels that his Dutch correspondents were in no better plight. Spinoza's remark need not be taken very seriously. His Dutch is awkward, but not more so than (or even as much as) that of his correspondent. Spinoza could express himself very well in Latin. But Latin was not the language in which he was brought up, and occasionally his spelling of Latin words betrays reminiscences of Spanish cognate terms.

LETTER XX

P. 152. This letter was written in Dutch. The original is in the possession of the United Baptists of Amsterdam. It was printed in the Dutch edition of the *Posthumous Works*, and translated into Latin for the *Opera Posthuma*.

P. 154, l. 9. "There is no absolute evil, as is self-evident." These are the only words actually quoted. What follows is Blyenbergh's summary of *Metaphysical Thoughts*, Part I, Chapter VI.

P. 164, l. 29. "Two miles." Probably two French miles are meant (equal to about seven English miles).

P. 165, l. 24. "(As Monsieur Descartes somewhere

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teaches us)." See Descartes's *Principles of Philosophy*, Part I, Principles XXXI ff.

P. 171, l. 16. "Both," namely, (1) the publication of Spinoza's own views, and (2) an enlarged edition of the *Metaphysical Thoughts*.

LETTER XXI

P. 172. This letter was written in Dutch, but the original is lost. The Latin version in the *Opera Posthuma* appears to have been made by Spinoza himself; the published Dutch version is a re-translation from this Latin version. But parts of the original Dutch letter are quoted in Blyenbergh's reply (Letter XXII).

P. 173, l. 4. "If I were once to find untrue. . . ." Compare the remark of Lessing that if God were to offer him the choice between the possession of Truth and the mere pursuit of it, he would prefer the latter.

P. 173, l. 2. "In my *Appendix*," namely, *Metaphysical Thoughts*, Part II, Chapter VIII.

P. 176, l. 3. "L. M." is L. Meyer.

P. 176, l. 10. "In the Appendix," namely, *Metaphysical Thoughts*, Part I, Chapter III, and Part II, Chapter XI.

P. 176, l. 36. "The assertion that God exists. . . ." Spinoza means that the existence of dependent, conditioned beings, such as human beings are, necessarily implies the reality of that unconditioned Ground of Reality whom we call God.

P. 177, l. 6. "In my *Appendix*," namely, in *Metaphysical Thoughts*, Part I, Chapter III.

P. 177, l. 35. "I do not deny that prayers are very useful to us," namely, as a means of inspiration or spiritual invigoration, not as a means of influencing God.

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Spinoza cannot think of God as subject to persuasion by means of tears and prayers. The highest relation between God and man is that of complete understanding. And the State, as a "City of God," should likewise be guided by laws based on the highest possible understanding, and not merely by feelings of pity or of vindictiveness. See *Ethics* IV, Proposition XXXVII, Scholium 2, and Appendix XVI.

P. 179, l. 5. "In my Appendix," namely, *Metaphysical Thoughts*, Part II, Chapters VII-IX.

P. 179, l. 24. "To your second point," etc. It is noteworthy that Spinoza attaches great importance to the fact that human volition is not kept within the bounds of human understanding. Man's attitude to life and reality is not one of intellectual insight merely, but also of adventure, of faith and hope.

P. 180, l. 15. "When Micah said to King Ahab," etc. See *I Kings*, Chapter XXII, verses 19 ff., and *II Chronicles*, Chapter XVIII, verses 18 ff.

P. 180, l. 27. "According to the word of Christ," etc. See *St. Matthew*, Chapter XXII, verses 37 ff.

P. 181, l. 23. "The work on Descartes," namely, the Dutch translation (by P. Balling) of Spinoza's geometric version of Descartes' *Principles of Philosophy* (1664).

LETTER XXII

P. 181. This letter was written in Dutch. The original is in the possession of the United Baptists of Amsterdam, and was printed in the Dutch edition of the *Posthumous Works*. The Latin version in the *Opera Posthuma* was made by the editors from the Dutch original.

It is noteworthy that quite a number of manuscript

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letters written by or to Spinoza have been discovered in "De Oranjeappel," the Collegiate Orphanage on the Keizersgracht in Amsterdam. This Orphanage was built in 1675. It is known that Jarig Jelles contributed 300 fl. towards it, and took a great interest in it. It would appear that when, two years later, he and Dr. Schuller and Dr. Meyer edited the *Opera Posthuma* and saw them through the press, "De Oranjeappel" must have been used for the purpose. For some of the manuscript letters discovered bear editorial notes. Thus the first part of the postscript to Letter XXII has a line round it, and at the side of it there is the editorial instruction to the printer "dit niet te zetten" ("this is not to be set up in type"). Similarly Letter XXVIII bears the editorial note "is van geener waarde" ("is of no value")—presumably because it was mainly of biographical interest. Moreover, it was in "De Oranjeappel" that a number of autograph letters have been found which were written by Dr. Schuller, one of the editors of the *Opera Posthuma*. "De Oranjeappel" is still in existence, but is no longer used as an orphanage, a house on the Heerengracht being used instead.

P. 186, l. 25. "Because they are repugnant to your special nature, but not because they involve vice." This is an ingenious distortion of Spinoza's attitude. Spinoza had said that he abstained from vice because vice as such was repugnant to his nature, and not (like Blyenbergh and his like) merely from the fear of punishment. Blyenbergh thereupon separates the repugnancy from the vice which as such causes it, and credits Spinoza with the aversion, but not with the aversion from vice as such! The cleverness of fools passes all understanding.

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LETTER XXIII

P. 188. This letter was written in Dutch, but appears to have been rendered into Latin by Spinoza himself, and so printed in the *Opera Posthuma*. The original letter is in the State Library in Berlin. A facsimile of it is included in W. Meyer's edition (1903). The version in the Dutch edition of the *Posthumous Works* is a re-translation from the Latin version. There are, however, no important differences between the original and these versions.

P. 190, l. 11. "Form" means "essential character." How it came to mean this has already been explained in the Annotations to Letter III.

P. 192, l. 17. "In my *Ethics*." The precise reference is difficult to make out. But see *Ethics*, IV, Proposition XXXVII, Schol. 2, and Proposition LXXII.

LETTER XXIV

P. 193. This letter was written in Dutch. The original is in the possession of the United Baptists in Amsterdam. It was printed in the Dutch edition of the *Posthumous Works*, and translated into Latin for the Latin edition by the editors.

P. 194, l. 21. The quotation is from P. Balling's Dutch translation of Spinoza's geometric version of Descartes' *Principles* and the appended *Metaphysical Thoughts*. In his other letters Blyenbergh usually quoted the Latin edition.

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LETTER XXV

P. 196. This letter is only known from the *Posthumous Works*, the original letter, written in Latin, having been lost.

P. 196, l. 31. Concerning Serrarius, see Annotations to Letter XIV.

P. 197, l. 5. "Domestic calamities." What the domestic trouble was, to which Oldenburg refers, is unknown; but we know that he experienced serious difficulties in earning a living.

P. 197, l. 19. Boyle published his *Experiments and Considerations touching Colours* in 1664, and *New Experiments and Observations upon Cold* in 1665.

P. 197, l. 22. "This unfortunate war." England declared war against the Netherlands in January 1665.

P. 197, l. 24. "Treatise on Sixty Observations with the Microscope," namely, Robert Hooke's *Micrographia*, which was published in 1665. Hooke (1635-1703) was at one time a research assistant to Boyle, and helped in the construction of his air-pump. When Oldenburg died, in 1677, Hooke succeeded him as Secretary of the Royal Society.

LETTER XXVI

P. 198. This letter is only known from the *Posthumous Works*, the original, written in Latin, having been lost. It is undated, but the opening sentence shows that it must have been written in May 1665.

P. 198, l. 9. "Ser." stands for Serrarius, concerning whom see the Annotations to Letter XIV.

P. 198, l. 13. "Z. D." stands for *Zeelhemi Dominum*,

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“Squire of Zeelhem” (or Züylichem), where his father, Sir Constantyn Huygens, had an estate. In the *Philosophical Transactions* of the Royal Society the full name is usually given—“Chr. Huygens de Zulichem.”

P. 198, l. 26. “Certain Telescopes constructed in Italy,” namely, by Giuseppe Compani in Rome. Christian Huygens endeavoured to find out how these big lenses were made, but failed to do so. Huygens himself was also very secretive about his own work on lenses, and warned his brother not to impart any information about them to Spinoza or to Hudde. Spinoza was very different in this respect.

P. 198, l. 28. The satellites of Jupiter were first discovered by Galilei, who observed four of them. A fifth was discovered in 1892, and two more in 1904. The shadow cast on Jupiter by the passage of its satellites or moons (or the Medicean stars, as they are also called) was first observed, in Rome, by Dominico Cassini, in 1665.

P. 198, l. 29. The Ring of Saturn was first observed clearly by Huygens in 1656. Already Galilei had observed something peculiar about Saturn, but owing to the inadequacy of his telescope he mistook the Ring for projections or for satellites.

P. 198, l. 31. “The rashness of Descartes.” See his *Principles of Philosophy*, III, Principle CLIV.

LETTER XXVII

P. 199. This letter was written in Dutch. The original is in the University Library at Leyden. It was first published by F. Halma, in 1705, in the *Boekzaal der Geleerte Werrelt*. A facsimile of it is included in Meyer’s edition (1903). The Latin translation of it, printed in the *Opera Posthuma*, was probably made by Spinoza

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himself, and was re-translated into Dutch for the Dutch edition of the *Posthumous Works*. There are no important differences between the original letter and the versions in the *Posthumous Works*.

LETTER XXVIII

P. 200. This letter was not included in the *Posthumous Works*. The original (in Latin) is in the possession of the United Baptists in Amsterdam. It was first published by Van Vloten in his *Ad Benedicti de Spinoza Opera Supplementum* (1860). A facsimile of the original letter is included in W. Meyer's edition (1903). On the back of the original there is a note (presumably by one of the editors of the *Opera Posthuma*) to the effect that it "is of no value." Hence its omission from the *Posthumous Works*. The letter is undated, but it must have been written early in June 1665. For the reference to the Dutch fleet, in the last paragraph, shows that it was written before June 13, 1665, when the Dutch fleet was beaten off Lowestoft.

Concerning Bouwmeester, see *Introduction*, § 6.

P. 201, l. 36. "Some of that conserve of red roses." A conserve of red roses, consisting of one part of rose-buds and two parts of sugar boiled in a little water, was at that time a recognized remedy for catarrhal affections of the lungs. The present letter affords the earliest explicit evidence of Spinoza's pulmonary tuberculosis, of which he died eventually, after more than twenty years of suffering.

P. 202, l. 9. "The third part of my philosophy . . . up to about the eightieth proposition." Part III of Spinoza's *Ethics* contains only fifty-nine propositions. It would appear that in 1665 he still intended to let the *Ethics* consist of only three parts, instead of the plan of

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five parts which he finally adopted. In 1665 accordingly the propositions of what is now Part IV were still included in Part III.

Concerning De Vries, see *Introduction*, § 6.

P. 202, l. 18. "Why the fleet does not set sail." Spinoza here voices the impatience of the Dutch with the inactivity of their navy. Eventually the authorities ordered an attack on the English coast near Harwich. But the attack, which took place on June 13, 1665, ended in disaster for the Dutch.

LETTER XXIX

P. 202. This letter was not included in the *Posthumous Works*. The original (in Latin) is in the possession of the United Baptists in Amsterdam. It was first published by Van Vloten in his *Ad Benedicti de Spinoza Opera Supplementum* (1860).

P. 202, l. 30. The letter of Spinoza (dated 4th September, 1665) to which this is the answer has unfortunately been lost. From the fourth paragraph of the present letter it is clear that in the lost letter Spinoza had given an account, among other things, of his intentions with regard to the *Tractatus Theologico-Politicus*.

P. 203, l. 7. "The Treatise on Colours." See Annotations to Letter XXV.

P. 203, l. 20. Athanasius Kircher (1601-1680) was a German born at Geisa near Fulda. He was educated at the Jesuit College in Fulda, joined the Jesuit Order in Mainz, and became Professor of Philosophy, Mathematics and Oriental languages at Würzburg. In 1631, owing to the Thirty Years War, he fled to Avignon, and in 1635 he settled in Rome. His *Subterranean World*

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(*Mundus Subterraneus*) was published in 1665. It deals with the forces and processes within the earth.

P. 203, l. 33. Boyle's *Origine of Formes and Qualities according to the Corpuscular Philosophy* was published in 1666. See Annotations to Letter III.

P. 204, l. 1. "You are not so much philosophizing as . . . theologizing." See above, annotations to page 202, line 30, and to Letter XXX.

P. 204, l. 10. "A second naval battle." The renovated Dutch fleet under the command of de Ruyter, and with de Witt on board, set out on August 14, 1665, to attack the English fleet off the Dutch coast. But, owing to unfavourable weather conditions, no action was fought.

P. 204, l. 21. Johann Hevelius (or Hevel, or Höwelcke) was born in Danzig in 1611, and died in 1687. He studied Jurisprudence in the University of Leyden, travelled in England and France, and then settled down in Danzig, where his father was a wealthy brewer. He took part in municipal affairs, but his chief interest was in astronomy. In 1641 he built a private observatory, equipped it with a telescope of 150 ft. focal length, and made many observations. He discovered the moon's libration in longitude, also four comets, and he suggested they had a parabolic orbit. In 1665 he published his *Prodromus Cometicus*, dealing with the comet observed in 1664. In 1668 he published his *Cometographia*, a book dealing with comets generally.

P. 204, l. 33. Christian Huygens (1629-1695). His *Horologium*, describing the pendulum clock which he invented, was published in 1658. He had invented it in 1656, and presented one to the States General in 1657.

His *Dioptrics* (begun in 1654) and his *De Motu Corporum* (begun in 1663) were published posthumously in 1700.

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P. 204, l. 35. "Finding out longitudes at sea." The method of measuring longitudes at sea by means of pendulum clocks is described as follows in Huygens' *Brevis Institutio de usu Horologiorum ad Inveniendas Longitudines* (also in the *Philosophical Transactions* of the Royal Society, No. 47, May 10, 1669).

At least two, preferably three or four, new clocks should be taken aboard the outgoing ship. They should be hung up in an enclosed place free from moisture and dirt, preferably amidships, where the motion of the vessel is least noticeable. Before the voyage the clocks should be adjusted to keep the correct time, by raising or lowering the pendulum bobs, or else they must be *rated* by finding how much each gains or loses during twenty-four hours. In rating the clocks against the sun, account must be taken of the *equation of time*, which is the difference between the apparent (solar) time and the mean (clock) time. Huygens appends a table giving the equation of time for each day in the year.

To determine longitude at sea, the *local* time must be obtained by observations of the sun or stars (see below), and compared with the corrected *clock* time, which is the *local* time of the port where the clocks were set going. If there is no difference between the observed local time and the clock time, then the ship is upon the same meridian as the home port; if the local time is later than the clock time, the ship is east of the meridian of the home port; if it is earlier, west. One hour's difference in the times corresponds to 15° difference in the longitudes.

The accuracy of the determination of longitude depends, then, upon the accuracy with which the local time can be estimated. Now the meridian altitude of the sun can be determined fairly accurately, and may suitably be used for calculating the *latitude*, but the

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precise instant when the sun attains its meridian altitude is very difficult to determine accurately, and should *not* be used for fixing the local time. The altitude of the sun may be measured when it is in the east or west, for its altitude is then changing most rapidly, and the local time can be calculated from the known latitude and the declination of the sun.

Huygens, however, prefers the following method :—

Note the time shown by the clock when the sun's centre is (1) rising in the east, (2) setting in the west. Add half the difference to the time of rising to obtain the clock time at the moment when the sun was crossing the meridian. Correct for rate and equation of time. This method is independent of the latitude, of the sun's declination, and of refraction, nor is any instrument required ; the alteration of longitude occasioned by the ship's travel during the day is to be regarded as negligible. The method may be varied somewhat by noting the times when the sun, or a known star, is at *equal altitudes* on the two sides of the meridian.

LETTER XXX

P. 205. This is part of a letter not contained in the *Posthumous Works*, and is only preserved as a (Latin) quotation in a letter which Oldenburg wrote to Boyle on October 10, 1665, and which was published in *The Works of Robert Boyle*, London, 1772, Vol. VI, pp. 200 f. Oldenburg's letter introduces the extract from Spinoza's letter as follows : “ In the same letter to Sir Robert [Moray] I took notice to him of what a certain odd philosopher (whom you know better than he, it being Signior Spinoza) hath very lately written to me concerning Mr. Huygens' transmigration into France, his pendulums and his progress in dioptrics, etc. The

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same Spinoza expresses a very great respect for you, and presents you his most humble service, and is displeased that the Dutch stationers will, in spight of our teeth, sell off one of their own Latin impressions of their History of Colours, before the translation made here can be sent thither. To give you an extract of what he is thinking and doing, he writes thus." [Here follows the extract from Spinoza's letter, as given in Letter XXX.]

P. 205, l. 21. "That famous scoffer," namely, Democritus (460-370 B.C.), who is alleged to have spent his time in deriding the vanity and stupidity of mankind. This side of his personality did not appeal to Spinoza, who held that human nature was not a fit subject for either laughter or tears, but for study. This is evident from the very next sentence in this letter, and from *Ethics*, Part IV, Prop. L, Scholium.

P. 206, l. 4. "A Treatise about my interpretation of Scripture," namely, the *Tractatus Theologico-Politicus*, published anonymously in 1670.

P. 206, l. 17. "The excessive authority and impudence of the preachers." The clergy of the dominant Calvinist Church, anxious to obtain control of the State, attempted to exploit the misfortunes of the war between Holland and England in order to overthrow the de Witts and their party, who were the defenders of religious liberty. The *Tractatus Theologico-Politicus* was intended by Spinoza to be a contribution to this bitter struggle, and is one of the classics written in defence of freedom of thought and of speech.

P. 206, l. 19. "Descartes' hypothesis." Descartes regarded space as full of matter. God set this matter in motion, and so gave rise to an enormous number of vortices or whirlpools of material particles of all sizes and shapes. Their friction rubs off their corners, with the result that in each vortex there are two kinds of

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particles, some coarse and some fine. The coarser particles are small spheres or globules which move round the centre of motion, but tend to recede from it. The finer particles are like fine dust, and tend to settle at the centre, where they form suns or stars. Some particles, however, become channelled and twisted in the course of their career through the vortex. And when they settle and form a crust on the surface of a star, the expansive force of the star is diminished so that neighbouring vortices encroach upon it and eventually catch it up. If the velocity of the star is greater than that of any part of the vortex which has caught it up, it will pass on to another vortex, and from that to another, and so on. Such a star is known as a comet.

LETTER XXXI

P. 206. This letter is only known from the *Posthumous Works*, the original letter, written in Latin, having been lost.

P. 207, l. 13. Concerning Kircher see Annotations to Letter XXIX.

P. 207, l. 22. Concerning Huygens see Annotations to Letter XXIX.

P. 207, l. 31. "I remember that you pointed out somewhere," namely, in the Preface to the Geometric version of Descartes' *Principles of Philosophy*, Parts I and II.

P. 208, l. 13. Concerning Hevelius, see Annotations to Letter XXIX.

P. 208, l. 14. Adrien Auzout was born in Rouen, and died in Paris in 1691. He was a member of the Paris Academy. The controversy in question turned on the comet which was observed in 1664. Hevelius (see Annotations to Letter XXIX) reported that the comet

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had appeared near the First Star of the constellation Aries. Auzout maintained that it had appeared near the Bright Star in the Left Horn of Aries. The Royal Society took up the matter in dispute between "these two deservedly celebrated Philosophers." On the strength of the reports of astronomers at home and abroad the Royal Society decided in favour of Auzout, and very courteously expressed the hope that "M. Hevelius, who is well known for his Ingenuity and Learning, will joyn and acquiesce in that sentiment." (*Philosophical Transactions* of the Royal Society, No. IX, February 12, 1666.)

P. 208, l. 23. Concerning the Hypothesis of Descartes, see Annotations to Letter XXX.

P. 208, l. 28. Huygens' removal to France. Under the regime of Jean Baptiste Colbert (1619-1683), who was Controller-General in 1665, attempts were made to attract to Paris eminent scholars and men of science from abroad. Huygens received a call in 1665, and moved to Paris in 1666.

P. 208, l. 31. "The Swedish army." During the war between England and Holland attempts were made to persuade the Swedish Government to send an army to attack the Dutch. But the project did not materialize.

P. 208, l. 32. "The Bishop of Munster," namely, Christoph Bernhard von Galen (1606-1678), invaded Holland in 1665 in the interests of the English, with whom he was allied. See Annotations to Letter XXXII.

P. 209, l. 5. "The nature of sounds." The experiments on this problem are referred to in Oldenburg's letter to Boyle, of October 10, 1665 (already mentioned).

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LETTER XXXII

P. 209. The original letter (in Latin) is in the possession of the Royal Society, London. A facsimile of it is contained in W. Meyer's edition (1903). The editors of the *Opera Posthuma* made use of a somewhat altered version kept by Spinoza. But the differences are not of much importance.

This letter on the Unity of Nature is referred to by Oldenburg in his letter to Boyle, dated November 21, 1665 (o.s.). The manner of his reference to it only shows how unworthy Oldenburg was of the pearls which Spinoza sent him. But allowances must probably be made for Oldenburg's keen awareness of Boyle's utter want of appreciation of all really philosophical discussions that were not intended merely to defend the dogmas of Christianity against pagans, Jews and Mohammedans. This is what Oldenburg wrote: "I had lately another letter from Signior Spinoza, who is very much your servant, and who entertains me with a discourse of his, concerning the agreement and coherence of the parts of the world with the whole; which is not unphilosophical in my opinion, though it would perhaps be tedious to you to have a letter filled with it; and this makes me forbear to send it to you" (*The Works of Robert Boyle*, ed. 1772, Vol. VI, p. 204). Nevertheless he appears to have been sufficiently impressed with it to think of publishing the letter in the *Philosophical Transactions* of the Royal Society, for on December 5, 1665, Oldenburg wrote to Boyle: "I think it will be most convenient in every way to remit Signior Spinoza's discourse *de consensu partium* till our personal interview" (*ibid.*, p. 205). This seems to suggest something more than a mere private discussion of the letter between

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Boyle and Oldenburg ; it appears to refer to the question of its publication.

P. 212, l. 1. "Power" (*potentia*). Under the influence of the logico-mathematical interpretation of Spinoza (see *Introduction*, § 8) the term *potentia* is usually taken to mean "possibility." But it is a misconception, and a very radical one. In *Ethics*, III, Proposition VII, Spinoza uses the term *conatus* as the equivalent of *potentia*. But nobody in his senses will interpret *conatus* as "mathematical possibility." In line 13 the Attribute Thought is also described as a power.

P. 212, l. 7. "Corporeal substance" here means the Attribute Extension.

P. 212, l. 32. Descartes' sixth law of motion was formulated by him as follows : "If the body C was at rest and exactly equal in size to the body B which is moving towards it, then it must partly be pushed by B and partly make it rebound ; so that if B approached C with four degrees of speed, it must transfer one degree to it and with the other three degrees return in the direction from which it had come" (*Principia*, Part II, Principle LI).

P. 212, l. 35. Concerning Huygens' dynamic experiments before the Royal Society, London, see Annotations to Letter XXXIII.

P. 213, l. 3. Huygens' optical researches in connection with the making of lenses were conducted with such secrecy that even if Spinoza had been inquisitive he would not have learned much about them. Huygens frequently mentioned Spinoza in his letters from Paris addressed to his brother Constantyn, but warned him to give no information, while obtaining all the information he could. The letters in question are those dated September 9, 1667 ; October 14, 1667 ; November 4, 1667 ; December 2, 1667 ; April 6, 1668 ; and May 11, 1668 ; and they are printed in Vol. VI of *Œuvres Complètes de Christian Huygens* (The Hague, 1895).

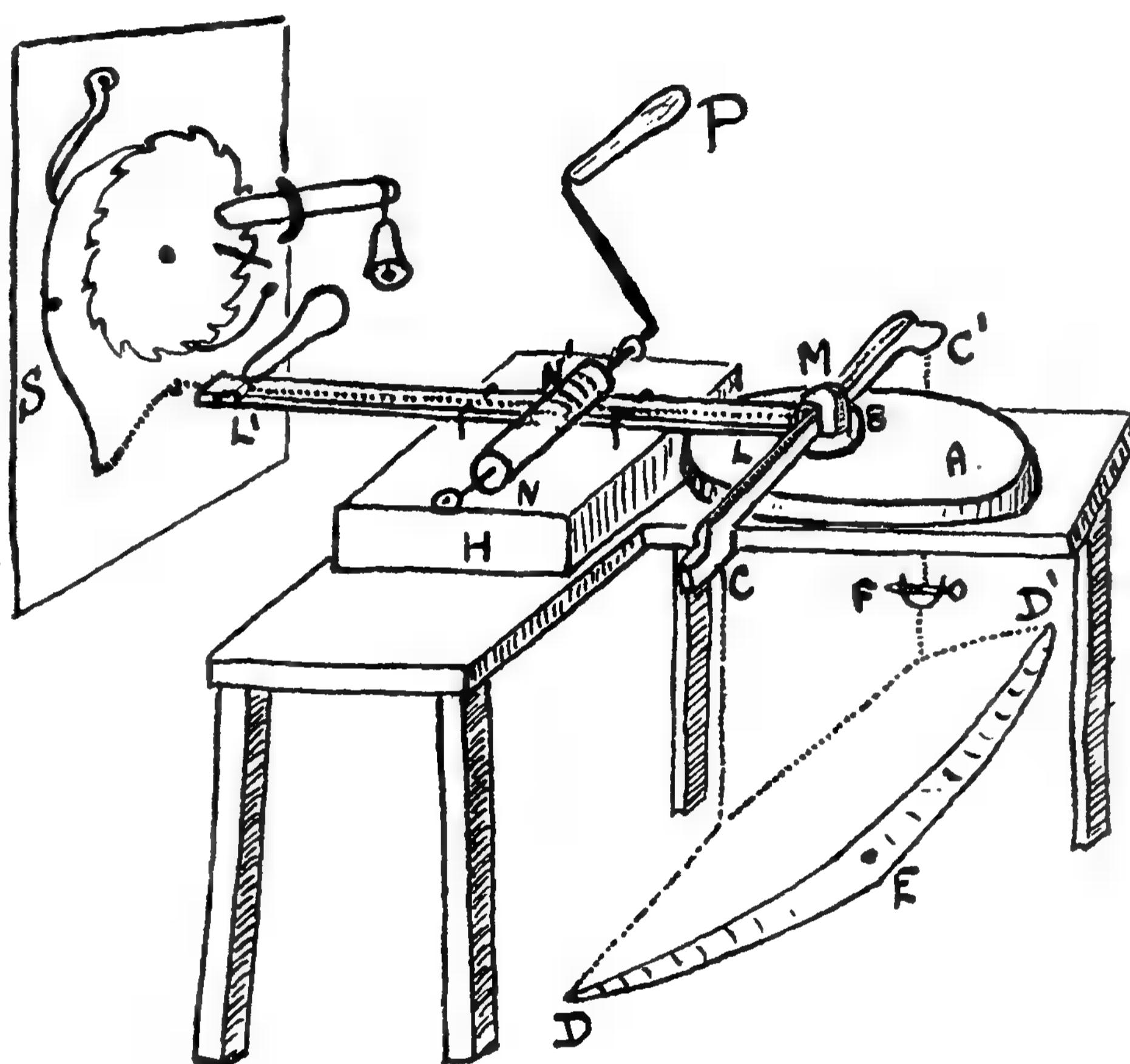
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P. 213, l. 5. "A machine in which he can turn tools." The Latin *patina* means a *dish* or *pan*, in fact *pan* is probably derived from *patina*. The "surfacing tool" for grinding and polishing convex lenses is shaped like a shallow dish, that is to say, it is concave. Of course the surfacing tool for making concave lenses is convex, and does not look at all like a dish. But the earliest lenses were convex, and so the earliest "tools" were all concave or dish-shaped, and the term *patina*, or *dish*, continued in use even when convex tools were employed. The process of grinding small lenses was as follows. A disk of glass about two inches in diameter was fixed with pitch on a flat metal holder (or "button") of about the same size and shape. A little sand or emery was strewn on the "tool" (which is more or less rough), and the glass was rubbed against it by movements to and fro until the glass acquired the curvature for which the "tool" had been constructed. Each kind of curvature required, of course, a special "tool" made to the required radius of curvature. The "tools" were made usually of copper or of cast brass, and had to be ground and polished on the lathe in a manner resembling the grinding of lenses. In Huygens' machine the "button" holding the disk of glass, instead of being moved to and fro by hand (a process involving hard work, especially in the case of large lenses) is moved indirectly by turning the handle of the machine. The following diagram gives the essentials.

A is the "tool," and B is the "button" or holder with the glass disk attached to it. The "tool" is crossed by a beam C C' to the middle of which is fixed a steel spike pressing down the apex of the conical metal "button" or holder. A bow-shaped piece of wood, D D', fastened to the floor at E, keeps the glass pressed down to the "tool" by means of a cord passing over the beam C C'. A beam L L', perpendicular to

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CC' is pegged down on the block H so as to be capable of moving only in the direction of its length. Fixed to this beam at L is a block M, into which the beam CC' is loosely mortised. Over L L' and at right angles to it is mounted a wooden roller N N', whose iron axle ends in a handle P. At L and L' are fixed the ends of cords which are wound, in opposite directions, about the



roller N N', their other ends being fixed to the roller. As the handle P is turned, first one way and then the other, the beam L L' oscillates, and the glass is moved to and fro upon the tool A. The glass and the tool have to be adjusted periodically, and the escapement to the left of the picture is a device for the automatic counting of the turns of the handle. This account is based on Robert Smith's *Compleat System of Opticks* (1738), from

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which the illustration is also taken. See Huygens, *Œuvres Complètes*, Vol. V (1893).

P. 213, l. 14. The Bishop of Munster, Christoph Bernhard von Galen, was an ally of England, and invaded Holland on September 23, 1665. He only escaped with difficulty from the marshes near Bourtang. After several battles fought with varying fortunes he was glad to make peace with the Dutch, on April 18, 1666, on the basis of the *status quo ante*. Spinoza very appropriately compares the Bishop's adventure, in invading the marshy region, with the adventure of Æsop's goat when, lured by the fox, it entered the well without first considering the question of ways and means of getting out again. (See the Fable of the Fox and the Goat, p. 15 of G. F. Townsend's Translation of Æsop's *Fables*, edition 1906.)

P. 213, l. 24. The "Dutch ambassador sent to France" was Van Gogh.

P. 213, l. 30. "The Prince of Orange." Two deputies of Overysel, Pallandt and Van Langen, conceived the scheme of sending the Prince of Orange to England in order to negotiate peace with the King of England, his grandfather. The States-General were not even consulted about this scheme, which came to nothing.

P. 213, l. 34. "The plans of the Swede." See Annotations to Letter XXXI.

P. 214, l. 21. "Kepler's hypothesis." Kepler (1571-1630), though he revolutionized astronomy, still clung to the ancient view that the fixed stars are parts of a solid sphere in the centre of which is the sun. The interior of this cosmic sphere he regarded as filled with an ether or ethereal air. Sometimes this ether condenses and so becomes opaque to solar and stellar light. Such an opaque ether-mass or ether-cloud is what is called a comet. The rays of the sun communicate an

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impulse to the comet, and make it move in a straight line, with a gradually increasing velocity, through the ether. In time the matter of the comet is destroyed by the light of the sun and is pushed away in the direction of the rays of the sun, forming a tail until it is dissolved.

P. 214, l. 25. Oldenburg's London address, to which this letter was sent, was that of Boyle's sister, Lady Ranelagh, to whose children Oldenburg acted as tutor.

LETTER XXXIII

P. 214. This letter is only known from the *Posthumous Works*, the original letter, written in Latin, having been lost.

P. 215, l. 18. Huygens' experiments before the Royal Society in London were made in the summer of 1663. They are mentioned in the *Philosophical Transactions*, No. 46 (April 12, 1669), p. 100.

P. 215, l. 27. "A certain distinguished man who had proposed many such experiments." This was probably Lord Brouncker (1620-1684).

P. 216, l. 10. "The windpipe both of sheep and of oxen filled with grass." The observations are recorded in the *Philosophical Transactions* of the Royal Society, No. 6 (November 6, 1665), and are there said to have been made by "two very ingenious men, Dr. Clark and Dr. Lower." The alleged fact is indeed described as "a pretty odde kind of Observation," but no suspicion is expressed about its accuracy. It seems, however, more than doubtful if so much grass could possibly find its way into the lungs at all; and it is certain that the ox could not have lived "two or three days" if its lungs had been choked up in that way. The most probable explanation is that the ox had an occluded

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œsophagus which was mistaken for the trachea. Such crude mistakes were not unknown in the seventeenth century.

P. 216. l. 8. "Certain distinguished Anatomists at Oxford"—namely, Josiah Clark (1639-1714) and Richard Lower (1631-1691). An account of them will be found in Dr. R. T. Gunther's *Early Science in Oxford*, Vol. III.

P. 216, l. 23. "A certain inquiring Doctor, also of Oxford." According to the *Philosophical Transactions*, No. 6, p. 117, it was Dr. Lower who also reported the following case to Boyle. But it seems that he reported it at second hand, and that the actual observation was made by Dr. Timothy Clarke, a Fellow of the Royal Society and Physician to the King. T. Clarke died in 1672.

P. 216, l. 27. "Was bled." Blood-letting was a very common remedy in the seventeenth century and long afterwards.

P. 216, l. 32. "This blood immediately took the form of a cake of milk. . . ." The *Philosophical Transactions*, No. 6, pp. 100 and 117, give an account of two cases of blood-letting in which "Milk" was found "instead of Blood." The first is a case reported from Paris, the second from Oxford. The "milk" or chyle is a whitish or grey plasma usually called the "buffy coat," which mixes with the blood. When blood-clots settle, the plasma rises to the top and forms a whitish layer or "buffy coat." In the case of people suffering from certain diseases the "buffy coat" may constitute a third or more of their blood. The rate of sedimentation also varies enormously with the condition of the person whose blood it is. It may have been rapid in the case reported. But it is impossible that "the blood which was collected in the saucer was all chyle." Its more whitish appearance in comparison with the other blood

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was probably due to the presence of more protein in it, and possibly also to the presence of a larger number of white corpuscles. But there must have been present red corpuscles as well.

P. 217, l. 8. "The Jews . . . are to return to their country." The reference is to a movement led by the false Messiah, Sabbatai Zevi (1626-1676). In a letter to Boyle (dated March 6, 1666) Oldenburg reports: "The last letters from Holland mention that now Christians as well as Jews write from Constantinople the confirmation of the reports concerning the nation of the Israelites, and the great hopes the Jews entertain of recovering their land very shortly" (*The Works of Robert Boyle*, ed. 1772, Vol. VI, p. 219). Like Serrarius (see Annotations to Letter XIV), many people in the seventeenth century were living in expectation of great things, and Jews were not exempt from this epidemic. Their long sufferings had made them especially prone to dreams of relief. Sabbatai Zevi began his short career as Messiah at Salonica in 1658, stayed several times in Cairo, where he gained great influence over a wealthy fellow-Jew, visited Gaza, which was to be the new Holy City, and Smyrna, his birthplace, and in 1666 also Constantinople, where he was imprisoned and forced to become a Moslem. The movement aroused general interest throughout Christendom, because many Christians had come to think of the return of the Jews to Palestine as the sign of the imminent end of all things.

Spinoza's reply to this letter of Oldenburg's is unfortunately lost. But we know that Spinoza did not regard the restoration of the Jews either as impossible or as undesirable. In his *Tractatus Theologico-Politicus* (published in 1670, that is long after the tragi-comedy of Sabbatai Zevi's failure) Spinoza wrote: "I would go so far as to believe that, if the foundations of their religion have not enfeebled their minds, they may, if the occasion

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presents itself amid the changes to which human affairs are so liable, even raise up their empire anew, and that God may yet elect them a second time" (Chapter III, near the end).

P. 217, l. 22. "The Swede and the Brandenburger." The reference is to the strained relations between Sweden and Brandenburg over the possession of Hither Pomerania. The Great Elector of Brandenburg consequently more than once joined in a coalition against Sweden.

* * * * *

After this letter there is a gap of ten years in the extant correspondence between Oldenburg and Spinoza. Partly, no doubt, the interruption was due to the continuation of the war between England and Holland (1665-1667), the Plague of London (1665), the Great Fire of London (1666), and Oldenburg's imprisonment in the Tower of London (June 30 till August 26, 1667).

LETTER XXXIV

P. 217. This letter was written in Dutch, but the original is lost. What is printed in the *Opera Posthuma* is probably Spinoza's own Latin version of the original letter; and the version in the Dutch edition of the *Posthumous Works* is a re-translation from the Latin.

Concerning Hudde, see *Introduction*, § 5.

LETTER XXXV

P. 219. This letter was also written in Dutch, and probably translated into Latin by Spinoza himself for future use or publication. The original letter is lost.

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The version in the Dutch edition of the *Posthumous Works* is a re-translation of Spinoza's Latin version printed in the *Opera Posthuma*.

P. 219, l. 33. "Your last letter." No letter from Hudde to Spinoza is extant now. The editors of the *Opera Posthuma* probably destroyed these and other letters for reasons already explained in the *Introduction*, § 9.

LETTER XXXVI

P. 222. This letter also was written in Dutch, but the original is lost. The *Opera Posthuma* contains what is probably Spinoza's own Latin rendering of it, and the Dutch edition gives a re-translation from the Latin.

P. 223, l. 16. "Limited denotes nothing positive." The Latin is *determinatum*, usually translated "determined," which term, as also the term "determination," in the familiar statement that "all determination is negation," must be understood to refer to the limiting or delimiting of finite objects within the unlimited or complete Attribute or Substance of which they are modes. For example, the marking of the boundaries of a finite portion of space within infinite Extension. In the expression "qualitative determination," the term determination has a very different meaning. It means "positive characterization," not negative delimitation. It is impertinent to apply the principle that "determination is negation" to such qualitative "determination" or characterization, especially to the Attributes as Spinoza conceived them. This confusion has been responsible for serious misinterpretations of Spinozism.

P. 225, l. 35. "The ratio of refraction" is the ratio which the sine of the angle of incidence of a ray bears to the sine of the angle of refraction.

P. 226, l. 3. Note the use of xx for x^2 . The now

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familiar index notation was introduced by Descartes, but was not generally adopted till much later. The sign of equality used by Spinoza is ∞ . The usual symbol is substituted in the translation for the sake of simplicity. The symbol $=$ was actually introduced by Robert Recorde in 1540 already, but it did not come into common use till much later.

LETTER XXXVII

P. 227. This letter was written in Latin, but the original has been lost. There is, however, an old copy of it in the Library of the United Baptists in Amsterdam. This copy differs from that printed in the *Opera Posthuma* only in a few unimportant details. The concluding sentence is from this old copy of the letter.

Concerning Bouwmeester, see *Introduction*, § 6.

P. 227, l. 32. Spinoza's sketch of the rationalistic side of his method almost suggests the phenomenological method of Husserl. It is certainly very different from the Baconian method, which Spinoza criticized, in Letter II, just because it does not set out from clear ideas about the nature of the understanding and its laws. Yet Dr. Gebhardt holds that this letter shows Baconian influences in the method of Spinoza !

LETTER XXXVIII

P. 228. This letter was written in Dutch. The original has been lost, but was, no doubt, faithfully reproduced in the Dutch edition of the *Posthumous Works*, and translated into Latin for the *Opera Posthuma* by the editors.

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Nothing is known about Mr. John van der Meer, to whom this letter was addressed.

P. 229, l. 1. The problem of the calculation of chances, or of the calculus of probability as applied to games of chance, seems to have attracted considerable interest in Holland in the time of Spinoza. Christian Huygens wrote on the subject, in 1656, and Jan de Witt and Johannes Hudde interested themselves in the problem. A tract on the subject first published in 1687 (*Reeckening van Kanssen*) is usually attributed to Spinoza, and included among his *Works* because it was bound together with an essay on the Rainbow (*Stelkonstige Reeckening van den Reegenboog*), which he is known to have written, although it was not included in his *Posthumous Works*, because the manuscript could not then be traced. Doubt has been expressed, by Freudenthal, whether Spinoza really did write the tract on *The Calculation of Chances*.

LETTER XXXIX

P. 231. The original letter, written in Dutch, has been lost. But as Jelles was one of the editors of the *Posthumous Works*, it may be assumed that the text of this letter in the Dutch edition of the *Posthumous Works* was true, or at least very close, to the original letter addressed to him. The Latin translation printed in the *Opera Posthuma* appears to have been made by Spinoza himself.

P. 231, l. 6. Descartes' *Dioptrics* is a very striking instance of the application of the "mechanical philosophy" to the problems of the reflection and refraction of light. The whole treatment of the phenomena of light is ingeniously worked out on the analogy of moving particles impinging on materials varying in hardness.

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The part of the *Dioptrics* to which this letter refers more especially is Chapter VIII.

P. 231, l. 34. "All come together at the point B." This would not be true for a solid sphere of glass, as it implies that the angle of refraction is always half the angle of incidence.

LETTER XL

P. 232. This letter also was written in Dutch, but the original has been lost. We may assume, however, that the text given in the Dutch edition of the *Posthumous Works* was true to the original letter, as Jelles was one of the editors. The Latin translation printed in the *Opera Posthuma* seems to have been made by Spinoza himself.

P. 232, l. 26. Johannes Fridericus Helvetius was Physician to the Prince of Orange. Christian Huygens knew "this little doctor," and had no great faith in him. In 1680 Helvetius published a book called *Theological Philosophy (Philosophia theologica)* against Descartes and Spinoza.

P. 232, l. 27. Isaac Vossius (1618-1689) wrote on the Septuagint (1661), on Poetry (1673), etc. He became Canon of Windsor in 1673.

P. 233, l. 4. The belief in the possibility of producing gold out of baser metals was widespread in the seventeenth century; even modern chemists have not altogether abandoned the idea.

LETTER XLI

P. 236. This letter was written in Dutch. The original has been lost. But it is most probably reproduced in the Dutch edition of the *Posthumous Works*.

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In this case (unlike Letters XXXIX and XL) the Latin terms are not given in the margin of the Dutch text, and we may assume that the Latin version given in the *Opera Posthuma* was not made by Spinoza.

This short letter is the only one that has survived of Spinoza's correspondence during the years 1667-1670. Reasons for the absence of other letters readily suggest themselves. These were busy years for Spinoza, and a very trying period both for him and his friends. Simon de Vries died in 1667. Pieter Balling died in 1669. Oldenburg was imprisoned in the Tower of London in 1667. Koerbagh, a warm friend of Spinoza and a too ardent apostle of Spinozism, was imprisoned, in Amsterdam, in 1668, and died in prison under gruesome circumstances. All who were suspected of being free-thinkers, or even liberal thinkers, were watched closely, and denounced to the civil authorities during these years. People were accordingly particularly cautious about writing letters to each other on philosophical or theological matters, and such letters as they did write were probably destroyed promptly by the recipients. Spinoza, moreover, was deeply occupied with the composition of his *Tractatus Theologico-Politicus*, the most effective reply to the theological zealots of his time, and of all times.

P. 237, l. 33. "The difference . . . takes place only at the beginning." The longer the tube, the greater the quantity of water that has to be set in motion by the head of pressure, and hence the longer the time required for the flow to reach its constant terminal velocity.

P. 238, l. 13. "Four degrees of speed." Spinoza must be thinking of the *distance traversed*. This is proportional to the *square* of the time. The actual velocity developed by a body under the action of a constant force is simply proportional to the time.

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LETTER XLII

P. 239. This letter is only known from the *Opera Posthuma*. The original letter, written in Latin, has been lost.

Concerning Velthuysen and Ostens, see *Introduction*, § 7.

P. 239, l. 8. “*Discursus*” is, of course, a slip for *Tractatus*.

P. 239, l. 31. Marin Mersenne (1588-1648) was educated at a Jesuit College, and wrote various theological treatises. He was a friend of Descartes, and defended him and his orthodoxy against various clerical critics. In 1624 Mersenne published an attack on freethinkers of all kinds—*L’Impiété des Deistes, Athées et Libertins combattue et renversée*.

P. 243, l. 25. “The paradoxical theologian” is L. Meyer (see *Introduction*, § 6). He was the author of *Philosophia S. Scripturae Interpres. Exercitatio Paradoxa in qua unam Philosophiam infallibilem S. Literas interpretandi Normam esse, apodictice demonstratur* (Amsterdam, 1666). In this book Meyer contended that the Bible in its original form and meaning must have been true to objective fact. For God was the author of both the Bible and the facts of Nature. Consequently, whatever there is now in the Bible, as we have it, that does not correspond with objective facts, must be a human interpolation or falsification. So it is only by means of true (that is, rationalistic) philosophy that the Bible can be properly studied and interpreted. Such a philosophy, in other words, is the proper interpreter of Scripture.

P. 244, l. 34. Spinoza’s Note. The reference is to Chapter VI (On Miracles) of the *Tractatus Theologico-Politicus*.

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LETTER XLIII

P. 254. This letter was written in Latin. The original draft has been preserved. It belongs to the Orphanage of the Baptist Collegiants in Amsterdam, and is kept in the Archives of the United Baptists there. A facsimile of it is included in W. Meyer's edition (1903), and there is also a facsimile of a part of it in Van Vloten's *Ad Benedicti de Spinoza Opera Supplementum* (1860). The text printed in the *Opera Posthuma* has a number of unimportant variations from the original draft.

The date of the letter is not quite certain. It was probably written in 1671, but possibly after Letter XLIV. It is put immediately after Letter XLII mainly because the two letters obviously belong together.

P. 255, l. 10. "For Atheists are wont inordinately to desire honours and riches." This expresses the usual conception of an atheist in the seventeenth century. Hence Spinoza's resentment. See Letter XLIV and the Annotations to it.

P. 255, l. 25. Gysbertus Voetius, or Voet (1588-1676), was a Dutch theologian. He was born in Heusden and studied in Leyden. In 1611 he became Pastor of Blynen, and in 1619 he played an important part in the Synod of Dort. In 1634 he was appointed Professor of Theology and of Oriental Studies at the University of Utrecht. He was also Vicar of Utrecht from 1637 onwards. He was an extreme Calvinist. In 1642 he persuaded the University of Utrecht to condemn the philosophy of Descartes. In 1643 there appeared a pamphlet (either written by him or at his instigation) in which the new (that is the Cartesian) philosophy was violently attacked as the cause of contemporary irreligion

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and immorality. Descartes replied to this in his *Epistola ad celeberrimum virum D. Gisbertum Voetium*.

P. 255, l. 35. "The reward of virtue is virtue itself. . . ." Compare *Ethics*, Part V, Proposition XLI, Scholium, and Proposition XLII. For Spinoza moral laws were divine whether ordained by God or not. Morality is autonomous, needing no other authority or sanction.

P. 256, l. 33. "Descartes who states . . ." The reference is to *Principia Philosophiae*, Part I, Principles XXXIX ff.

P. 258, l. 23. "Rabbi Judah Alpakhar" was a distinguished Jew of Toledo, and Physician-in-ordinary to King Ferdinand III. He died in 1235. He was rather anti-philosophical, and opposed to Maimonides, who tried to harmonize Judaism and Philosophy. The maxim of Alpakhar (to which Spinoza refers in the *Tractatus Theologico-Politicus*, Chapter XV) was that "whatsoever Scripture teaches . . . must on its own sole authority be admitted as absolutely true." The title "Rabbi" or "Rab" means "Mr." or "Magister," not "Reverend," as is sometimes supposed.

LETTER XLIV

P. 260. This letter was written in Dutch, and the Dutch edition of the *Posthumous Works* appears to reproduce the original, which has itself been lost. The Latin version in the *Opera Postuma* was translated by the editors from the Dutch original.

P. 260, l. 4. "Professor" Who this was is not known for certain. It may have been Professor Kranen, at that time Professor of Philosophy at the University of Leyden, and a Cartesian. There is a reference to him in Letter LXVII by Burgh. In the Dutch edition

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of the *Posthumous Works* there are six dots after “Professor” (the Latin has N. N.), and they may stand for the six letters in the name Kranen. But that is only a conjecture.

P. 260, l. 6. The *Tractatus Theologico-Politicus*, which was published anonymously in Latin in 1670, was promptly translated into Dutch by J. H. Glazemaker, probably at the instigation either of Jelles or of Rieuwertsz (the publisher). Owing to the present letter, however, the Dutch version was not published at the time. In fact, it was not published until 1693, when it appeared under this title of *De Rechtzinnige Theologant*.

P. 260, l. 16. *Homo Politicus* was published anonymously in 1664. Its full title is *Homo Politicus, hoc est: consiliarius novus, officiarius et aulicus secundum hodiernam praxin*, auctore Pacifico a Lapide. The author of it is alleged to have been Christophorus Rapp, Chancellor to the Great Elector of Brandenburg. The book is a kind of adaptation of Macchiavelli’s *Prince* for the use of unprincely folk. The summary of its leading ideas given by Spinoza in this letter fairly conveys the conception that people had then of an atheist. Spinoza did not carry out his first intention of writing a book against it, but parts of his *Political Treatise*, notably Chapter X, §§ 4-8, appear to be directed against it.

P. 261, l. 2. Thales of Miletus (*circa* 600 B.C.). The story is related in the *Lives of the Philosophers* by Diogenes Laertes (I, 26), also by Cicero (*On Divination*, I, 111), and by Alexander ab Alexandro (*Genialium Dierum libri sex*), etc.

LETTER XLV

P. 261. The original letter, written in Latin, is in the possession of the Orphanage of the Baptist Collegiants in Amsterdam, and is in the Archives of the United

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Baptists there. It was printed in the *Opera Posthuma* with the omission of Hudde's name and of the postscript, and with a few unimportant changes.

P. 262, l. 3. "A Note on Advanced Optics" (*Notitia Opticae promota*) was published in Frankfurt a. M. in 1671. It is, of course, reprinted in the complete works of Leibniz (pp. 14 f. of Vol. III in the edition of 1768). It is also given in T. de Murr's *Benedicti de Spinoza Adnotationes ad Tractatum Theologico-Politicum* (1802), pp. 24 ff.

P. 262, l. 7. Concerning Hudde, see *Introduction*, § 5.

P. 262, l. 13. Franciscus Lana (1631-1687) was, at the time of this letter, Professor of Philosophy and of Mathematics in Rome. His *Prodromus* was published in 1670. Its full title is *Prodromo, overo Saggio di alcune inventioni nuove premesse all' Arte maestra* (Brescia).

P. 262, l. 15. Johannes Oltius. Unknown.

P. 263, l. 2. J. de Diemberbroeck was a lawyer of Utrecht.

P. 263, l. 6. "Doctor" (*Médecin*) was used in the sense of "a man of science."

LETTER XLVI

P. 263. The original of this letter, written in Latin, is in the former Royal Library in Hanover, where Leibniz was librarian at one time to the Duke. There is a facsimile of it in W. Meyer's edition (1903), and of a part of it in T. de Murr's *Benedicti de Spinoza Adnotationes ad Tractatum Theologico-Politicum* (1802). For the *Opera Posthuma* Spinoza's rough draft of the letter appears to have been used. The differences are not important.

P. 263, l. 29. "Pandochal" means "all-receptive," or "receiving all the rays," in this context.

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P. 265, l. 7. An interesting feature of the original of this letter is the seal of Spinoza, an oval ring containing a rose, the initials B. D. S., and the word *caute* (beware). Presumably the whole idea of the seal was a pun on the name Spinoza (*Spinoza* means a thorn). See the front cover of this volume. Some people see in this seal a symbol of the Rosicrucians, the Freemasons of the seventeenth century.

LETTER XLVII

P. 265. This letter is only known from the *Opera Posthuma*. The original letter, written in Latin, has been lost.

Concerning Fabritius, see *Introduction*, § 7.

P. 265, l. 19. The Prince Palatine who sent the invitation to Spinoza was Karl Ludwig, brother of Christina, Queen of Sweden, the patroness of Descartes. According to Urbain Chevreau (1613-1701), a learned courtier who travelled a good deal and visited many European courts, it was he who had recommended Spinoza to the Prince Palatine. In his *Chevraeana* (Vol. II, p. 100, edition 1700) he writes: "At the court of the Prince I spoke very favourably about Spinoza, although I only knew of this protestant Jew from the *First and Second Parts of Descartes' Principles of Philosophy*, printed in Amsterdam, in 1663, by Jan Rieuwertsz. The Prince had this book, and after I had read out to him a few chapters from it, he decided to invite him to his University at Heidelberg, to teach Philosophy there, but with the condition that he should not dogmatize." Supposing that Chevreau did not grossly exaggerate his share in Spinoza's call to Heidelberg, it is possible that Chevreau's account was intended to exonerate him from the charge of having recommended a heretic to an

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important post. So he pretends not to have known the *Tractatus* then. There is, however, some reason to suppose that it was the author of the *Tractatus Theologico-Politicus* that the Prince Palatine wanted, and not merely the author of the geometric version of Descartes' *Principles of Philosophy*. The spirit of the *Tractatus* probably appealed to the Prince because he was anxious to bring about a Union of the Reformed Churches, and for this end there was needed something of the spirit of undogmatic toleration advocated in the *Tractatus*.

LETTER XLVIII

P. 266. This letter also is only known from the *Opera Posthuma*, the original letter, written in Latin, having been lost.

P. 267, l. 1. Of the wisdom of Spinoza's refusal of the Heidelberg Professorship there can be no doubt. No University was sufficiently mature then to permit the teaching of Spinozism. It was also fortunate, inasmuch as already in the following year the French seized Heidelberg and closed the University.

LETTER XLVIII A

P. 267. The story of these fragments is told by Bayle and by Dr. Hallmann as follows. (a) *Bayle*: "A certain Jarig Jelles, his intimate friend, being suspected of some heresies, thought that he ought to justify himself by publishing a confession of his faith. Having drafted it he sent it to Spinoza, and asked him to write his opinion of it. Spinoza replied to him that he had read it with pleasure, and that he had not found anything in it which could be altered. 'Sir and very

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distinguished Friend, etc.' . . . This confession of faith is in Dutch and was printed in the year 1684." (*Historical and Critical Dictionary*, edition 1702, Vol. III, p. 2783, Note S. Translated in *The Oldest Biography of Spinoza*, p. 164.) Jelles' *Confession* is accompanied by a biographical sketch written probably by Rieuwertsz, the publisher. In this we are told that Jelles had sent his *Confession* to "a certain friend outside the city," no doubt Spinoza, and that the reply received was, "I have read, etc." (the same as the reply cited by Bayle, but in Dutch, whereas Bayle quotes the letter in Latin).

(b) *Dr. Hallmann* reports the following conversation with Rieuwertsz, junior, in 1703. "More letters had been found than had been printed; but they were of no importance, and so were burned. But he had kept one letter, which was lying upstairs among his things. At last I persuaded him to fetch the letter and show it to me. It was a short letter written in Dutch on half a sheet of paper. The date was the 19 April, 1673," etc. (as in the text). (From *Dr. Hallmann's Journal of Travels*, in German, quoted in J. Freudenthal's *Die Lebensgeschichte Spinoza's*, 1899, pp. 231 ff.)

P. 268, l. 4. "On page 5 of the manuscript he stated," etc. This statement is not in the printed text of the *Confession*. Presumably Jelles omitted the passage in consequence of Spinoza's comment.

P. 268, l. 10. Dirck (or Theodor) Kerckrinck was born in Hamburg in 1639, and came with his parents to Amsterdam at an early age. At eighteen he suddenly decided to prepare for the University, and went to Van den Enden to learn Latin, etc., for the purpose. Two years later (1659) he entered the University of Leyden, and was still there when Spinoza came to Rhynsburg in 1660. Kerckrinck became a distinguished doctor, and some of his medical treatises are included in the inventory of Spinoza's books—no doubt gifts from an old

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friend whom he had met originally at Van den Enden's house. In 1671 Kerckrinck married Clara Maria, the eldest daughter of Van den Enden. Clara was twenty-seven then. Kerckrinck eventually settled in Hamburg, where he died in 1693.

P. 268, l. 13. "The Known Truth." This must be the title of a book. But no such treatise can be traced now. It may have circulated in manuscript only, as happened with many books in the seventeenth century, especially with unorthodox books. Spinoza's *Short Treatise*, and Lucas' *Life of Spinoza*, for instance, only existed in manuscript then.

P. 268, l. 14. "Mr. Vallon" (*D. Vallon*; usually D = Dominus = Mr.). Rieuwertsz, junior, described Mr. Vallon to Dr. Hallmann as a Professor in the University of Leyden, and a particular friend of Spinoza's (see J. Freudenthal's *Die Lebensgeschichte Spinoza's*, 1899, p. 231). But he cannot be traced. The name may be an error for De Vallan, who was at one time Professor in the University of Utrecht, or for De Volder (1643-1709), who was Professor of Physics and Mathematics in the University of Leyden. Other names which have been suggested are De Vries, who was at one time co-Rector of the Grammar School at The Hague, and De Versé, a Socinian. But all this is mere conjecture.

P. 268, l. 16. "Mr. Bronckhorst." Probably Hendrik van Bronckhorst is meant. He was a Mennonite and a Cartesian, and apparently a friend of Spinoza. He was the author of the laudatory verses which were prefixed to the Dutch translation of Spinoza's *Geometric Version of Descartes' Principle of Philosophy* published in 1664. The laudatory verses in the Latin original, published in 1663, were by Bouwmeester.

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LETTER XLIX

P. 268. The original letter, written in Latin, is in the Royal Library at Copenhagen. A facsimile of it is contained in W. Meyer's edition (1903).

Concerning Graevius, see *Introduction*, § 7.

P. 268, l. 29. "The letter concerning the death of Descartes" had been written on $\frac{I}{II}$ February, 1650, by Johannes a Wullen, an Amsterdam doctor who lived in Sweden, to W. Piso, a medical man in Amsterdam. What Graevius had was a copy of the original, and this copy is now in the University Library at Leyden. The letter is printed in Van Vloten and Land's edition of Spinoza's Works. The main purport of the letter was to the effect that Descartes was wholly to blame for his death, because he did not consult a doctor when he first became ill, and would not accept Wullen's services when, at the request of the Queen of Sweden, he visited Descartes and offered to treat him. To crown it all. Descartes resorted to excessive blood-letting when he was too weak, in consequence of having taken no nourishment for several days.

P. 268, l. 30. "Mr. de V." It is not known who this was. It may be the same person who is called Mr. Vallon [D. Vallon] in Letter XLVIIIA. See Annotations to that letter.

LETTER L

P. 269. The original of this letter, written in Dutch, has been lost. The *Opera Posthuma* gives what appears to be Spinoza's own Latin rendering of it, which was

C O R R E S P O N D E N C E O F S P I N O Z A
re-translated into Dutch for the Dutch edition of the
Posthumous Works.

Concerning Jelles, see *Introduction*, § 6.

P. 269, l. 15. Thomas Hobbes of Malmesbury (1588-1679), author of *Leviathan*, etc., was the favourite political philosopher among the political theorists of the party of the De Witts. Van Hove, who was their chief spokesman, simply refers his readers to the writings of Hobbes for all further explanations. The naturalism of Spinoza also inclined him to embrace some of the political theories of Hobbes. Nevertheless there are important differences between them, which must be reserved for discussion in connection with the *Political Treatise* of Spinoza. In the meantime reference may be made to C. E. Vaughan's *Studies in the History of Political Philosophy before and after Rousseau* (2 vols., Manchester, 1925).

P. 269, l. 22. "In the Appendix to . . . Descartes' *Principles*," namely, in the *Metaphysical Thoughts*, Part I, Chapter VI.

P. 269, l. 23. "God can only very improperly be called one." What Spinoza says here of God or Substance applies equally to Attributes. So that strictly speaking it is not altogether correct to speak of "two" or of "innumerable" Attributes. Spinoza usually speaks of them as "infinite" in the sense that they are "all" there are (besides, of course, being each infinite or complete of its kind).

P. 269, l. 24. "A thing can only be said to be one . . . in respect of its existence and not of its essence." See Letter IX.

P. 270, l. 13. "The limitation (*determinatio*) . . . is its not-being." See Annotations to Letter XXXVI.

P. 270, l. 18. "A Professor of Utrecht." This was Regner van Mansvelt, who had succeeded Voetius (see Annotations to Letter XLIII) as Professor of Philosophy

ANNOTATIONS

in the University of Utrecht. Mansvelt published an attack on Spinoza's *Tractatus Theologico-Politicus* in 1674. The title of the book was *Adversus Anonymum Theologico-Politicum, Liber Singularis* (Amsterdam).

LETTER LI

P. 270. The original letter, written in Dutch, has been lost. The *Opera Posthuma* appears to give a Latin translation of it made by Spinoza himself. The Dutch edition of the *Posthumous Works* gives a re-translation of the Latin version.

Concerning Boxel, see *Introduction*, § 5.

P. 271, l. 21. "The war," namely, between Holland and France. On August 11, 1674, an indecisive battle had been fought between the Dutch army, under the Prince of Orange, and the French army, under Condé, at Séneffe. In September the Prince of Orange made an unsuccessful attack on the French at Oudenarde.

LETTER LII

P. 271. The original letter, written in Dutch, has been lost. It is probable, however, that the text contained in the Dutch edition of the *Posthumous Works* is an exact reproduction of it, since no Latin terms are given in the margin of the letter, as they usually are given when the Dutch text is a translation of the Latin.

P. 272, l. 18. Spinoza's views on ghosts and spirits, good and evil, were quite revolutionary for that period. Already in 1660, or earlier, Spinoza gave a humorous account of evil spirits in his *Short Treatise* (Book II, Chapter XXV, p. 143 of my translation), where he

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remarked that if the devil is as god-forsaken as he is commonly believed to be, he must be so wretched that we ought to pray for him.

LETTER LIII

P. 273. The original letter, written in Dutch, is preserved in the Orphanage De Oranjeappel, in Amsterdam. The Latin version in the *Opera Posthuma* seems to have been made by Spinoza himself. There are no important differences between the two versions. The original Dutch text is given in J. Freudenthal's *Die Lebensgeschichte Spinoza's*, 1899, pp. 196 ff.

P. 274, l. 30. Johannes Wierus, also called Wier, or Weyer, was born in Belgium in 1515 or 1516, studied medicine in Paris, and eventually settled in Düsseldorf as Physician to the Duke of Jülich. In 1563 he shocked the clergy by his book *On Daemon-Illusions* (*De Praestigiis Daemonum*), in which he denounced the folly and cruelty of prosecutions against witches, whom he regarded as mentally afflicted. The book was put on the Index, but was soon followed by two others, *On Ghosts* (*De Lamiis*), and *Pseudomonarchia Daemonum* on the Hierarchy of Hell. The original text gives the name as Wierius, which is corrected in the *Opera Posthuma*.

P. 274, l. 31. Ludwig Lavater (1527-1586) was a Protestant Minister in Zurich. His book on ghosts, etc., entitled *Tractatus de Spectris, Lemuribus, Fragoribus, variisque Praesagiis* was published in 1580 at Geneva.

P. 274, l. 32. Cardanus. Girolamo (or Hieronymus) Cardanus (or Cardan) was born at Pavia in 1501, and died in Rome in 1576. In 1547 he became Professor of Medicine in Pavia, but got into trouble through exposing the medical practices of his time. In 1551 he visited Scotland as medical adviser to Archbishop Hamilton.

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In 1562 he was appointed Professor at Bologna, but was dismissed soon as a heretic, apparently because he cast the horologue of Christ, and attempted to give an astrological account of his life. After that he lived in Rome on a pension from the Pope. His *De Subtilitate Rerum* was published in 1551, and his *De Rerum Varietate* in 1557. In these two treatises Cardanus attempted to explain natural phenomena in a very speculative manner, but still in a manner that was highly creditable for that period, inasmuch as he insisted on the inviolability of the laws of Nature. That even he was not entirely free from superstition seems to be shown by his claim that, like Socrates, he had the assistance of a guardian dæmon.

P. 275, l. 1. Melanthon. Probably the German Reformer Philipp Melanchthon (1497-1560) is meant.

P. 275, l. 21. Alexander ab Alexandro (1461-1523). He was an Italian lawyer, who studied and practised at Naples (his birthplace) and at Rome (where he died). On receiving a sinecure appointment at Rome, under papal patronage, he abandoned legal practice and devoted himself to literary work. His *Genialium Dierum, libri sex* was published in 1522. It deals almost entirely with Roman antiquities and problems of legal and classical scholarship. It is a bulky miscellaneous work modelled more or less on the *Saturnalia* of Macrobius (395-423), or on the *Noctes Atticae* of Aulus Gellius (130-180).

P. 275, l. 26. Petrus Thyraeus, or Tyraeus (1546-1601), was Professor at various times at Trier, Mainz and Würzburg. His *De Apparitionibus Spirituum* was published in 1600, at Cologne.

P. 275, l. 35. The concluding two paragraphs of the letter are only in the original, not in the *Posthumous Works*. The reference to the concluding part of Spinoza's letter (LII) is obscure because we do not know what it really was.

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LETTER LIV

P. 276. The original of this letter, written in Dutch, has been lost. The Latin version of it in the *Opera Posthuma* appears to have been prepared by Spinoza himself.

P. 276, l. 29. A copy of Pliny's *Letters* is mentioned in the inventory of Spinoza's books compiled immediately after his death.

P. 278, l. 35. "Beauty . . . is not so much a quality of the object which is perceived as an effect in him who perceives it." In an age in which the most eminent thinkers (Galilei, Descartes, Boyle, Newton, etc.) regarded even secondary qualities as subjective rather than as objective, it is not surprising to find Spinoza treating a tertiary quality like beauty in the same manner. At the same time, it is quite possible to reconcile Spinoza's view with an objective conception of tertiary (as well as of secondary) qualities, if we bear in mind that for Spinoza the percipient subject is as much a part of the objective order of Nature as any other part thereof, and that the qualities in question are consequently objective if we enlarge the sphere of reference so as to include the observer as well as the observed phenomenon within the field of fact of which the quality is properly predicated.

P. 280, l. 28. For Spinoza the belief in supernatural apparitions, like the belief in miracles, is the result of ignorance or of stupidity. Compare Letters LXXV and LXXVIII, and *Tractatus Theologico-Politicus*, Chapter VI.

LETTER LV

P. 281. The original letter, written in Dutch, has been lost. But the Latin rendering of it in the *Opera Posthuma* seems to have been made by Spinoza himself.

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P. 285, l. 7. "Substance and accident." See Annotations to Letter IV.

P. 286, l. 13. Caesar and Spurina. The story is related in Suetonius' *Caesar*, chapter 81.

LETTER LVI

P. 286. This letter was written in Dutch, but the original has not been preserved. Spinoza himself appears to have prepared the Latin version of it that is printed in the *Opera Posthuma*, the Dutch edition of which contains simply a re-translation of the Latin version.

P. 287, l. 18. "Coercion or Force and Necessity." The confusion between external coercion and inner necessity is one against which Spinoza is always protesting, though mostly in vain. Human conduct is partly the result of external influence, and partly the result of an inner drive which is the expression of the individual's own nature. The external factor is the element of coercion, the inner factor is the factor of freedom—the more the latter predominates, the more free the individual is. The libertarian idea of a Freedom of indifference, which would make conduct independent of character (and of the inner necessity that this implies), really puts caprice in the place of free-will.

P. 288, l. 12. "A triangle, if only it had the power of speech, would say in like manner that God is eminently triangular. . . ." Compare the remarks of Xenophanes (sixth century B.C.):—"If oxen and horses or lions had hands, and could paint with their hands, and produce works of art as men do, horses would paint the forms of the gods like horses, and oxen like oxen." "The Ethiopians make their gods black and snub-nosed; the Thracians say theirs have blue eyes and red hair."

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(See J. Burnet: *Early Greek Philosophy*, 3rd ed., p. 119.
Compare also Rupert Brooke's poem *Heaven*.)

P. 288, l. 16. "Make itself like unto God." The context requires "make God like unto itself." Was it a slip, or an attempt to avoid the appearance of blasphemy?

P. 288, l. 23. "In the world we often act on conjecture. . . ." Spinoza, it is clear, would agree with the subsequent remark of Bishop Butler that "probability is the guide of life," so far as the practical contingencies of life are concerned. We are often called upon to act under circumstances which make it impossible for us to make sure of our ground. Spinoza himself has pointed out the element of adventure or of faith in our practical attitude to life. Without it we should perish of hunger and thirst (see the next sentence but one in this letter, and the Annotations to Letter XXI). But in the case of theoretical or scientific problems his attitude is that subsequently expressed by Huxley, who insisted on a sceptical scrutiny of the credentials of every suggestion or belief.

P. 288, l. 26. "Man would perish of thirst and hunger if he would not eat or drink until he had obtained a perfect proof that food and drink would do him good." See Letter XXI, and compare Schiller's poem *Die Weltweisen*, which may be rendered roughly as follows:

Since what Professors teach
Not unto all can reach,
'Tis Nature's maternal rôle
To keep things sound and whole.

And while Philosophy strives
To learn to guide our lives,
Nature prompts us from above
Through hunger and through love.

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P. 289, l. 20. "As clear an idea of God as . . . of a triangle. . . ." Spinoza insists that we cannot have a clear and true *presentation* or *image* of God, but that we can have a clear and true *idea* or *conception* of Him. The attempt to image God can only result in our treating Him as one finite link in the whole system or chain of causes and effects in the universe. The outcome is an idol of some sort, such as usurps the place of God in popular theologies. To *conceive* God correctly is to realize intellectually that the conditioned events or dependent objects which we observe presuppose or imply an Unconditioned Ground, Substance, or *Causa Sui* (in Spinoza's sense of these terms). Compare the Annotations to Letter XII.

P. 290, l. 14. "The authority of Plato, Aristotle, and Socrates." It was characteristic of the age of revolt to hold "authority" in low esteem, even at the cost of insufficient appreciation of great thinkers whom the Schoolmen had unfortunately exploited as "authorities" and obstructions to independent thought in a manner that those "authorities" would have been the first to denounce.

The inventory of Spinoza's books includes a Latin translation of the complete works of Aristotle, but nothing of Plato.

P. 290, l. 16. Epicurus (341-271 B.C.), Democritus (460-370 B.C.), Lucretius (99-55 B.C.) were all of them supporters of the atomic theory, and as such were much in favour among the men of science of the seventeenth century. Lucretius' *De Rerum Natura* (*On the Nature of Things*) gives a poetical and classical account of the atomic theory of the ancients.

P. 290, l. 19. "Occult Qualities, intentional species, substantial forms." Concerning "substantial forms" and "occult qualities" see the Annotations to Letter III.

By "sensible species" were meant certain minute pictures or films which were alleged to pass from seen

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objects to the seeing eye. This theory of vision, by means of "representative pictures," appears to have been suggested first by Democritus, who called them "idols" ($\epsilon\iota\delta\omega\lambda$). It was probably based upon a more primitive conception based on dream experiences. In any case all sorts of "species" flourished in scholastic philosophy, and were only gradually laid to rest by the corpuscular and the undulatory theories of light.

Sometimes the term "intentional species" (or "intentional sensible species") was used as the equivalent of "sensible species." Usually, however, in the epistemological discussions in Scholastic philosophy the term *species* was used for any representation of the *form* of an object, and the term "intentional species" was restricted to the *mental* representation of the *form*—the term "form" being here used in its Platonic or Aristotelian sense (see Annotations to Letter III).

P. 290, l. 23. "They burned all his [Democritus'] books." The story is told by Diogenes Laertes in his *Lives of the Philosophers*, also in various Humanist compilations of the type of Alexander ab Alexandro's *Genial Days*.

LETTER LVII

P. 291. This letter is only known from the *Posthumous Works*, the original, written in Latin, having been lost. It was not addressed to Spinoza, but to Schuller, who sent Spinoza a copy of the part that concerned him.

Concerning Tschirnhaus and Schuller, see *Introduction*, §§ 5 and 6.

P. 291, l. 8. "At the beginning of his *Method*." The Dutch version has instead "in the said paragraph" (or section). The opening part of this letter has obviously been omitted. In the omitted part reference must

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have been made to Descartes' *Method*, and the Dutch version no doubt gives a correct rendering of the original in this case, while the more careful editors of the *Opera Posthuma* made the small alteration that was made necessary by the omission of the beginning of the letter.

P. 291, l. 17. "If one of two men affirms something but the other denies it. . . ." The meaning of this sentence is not very clear. Tschirnhaus seems to be confusing (as people often do) *Truth* with *Truthfulness* (or *Veracity*). What he says applies to the veracity of a statement, not to its truth. Two people may honestly or truthfully make inconsistent assertions, but inconsistent assertions cannot both be true, except, perhaps, for a pragmatist, who is not really concerned with *Truth*, but with *Utility*.

P. 293, l. 30. "And you will find me . . . N. N." Only in the Dutch edition of the *Posthumous Works*.

LETTER LVIII

P. 294. This letter is only known from the *Posthumous Works*, the original, written in Latin, having been lost.

P. 294, l. 6. "Our friend J. R." This was Jan Rieuwertsz, bookseller and publisher, of Amsterdam. He was born in Amsterdam in 1617. He was a Collegiant, and his bookshop was a rallying centre of liberal thinkers. He published J. H. Glazemaker's Dutch translation of the Works of Descartes (in four volumes), and he published all the works of Spinoza, though the fact had to be concealed in every case except in that of the *Geometric Version of Descartes' Principles of Philosophy*.

P. 295, l. 22. "This stone," etc. The kind of freedom which Spinoza rejects, and which this illustration is meant to explain away, is the so-called "freedom

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of indifference," according to which an individual, it is alleged, is utterly free to do anything within his power (that is to say, in so far as he is not hindered or coerced by forces outside him) entirely uninfluenced by his own character and his past history. Compare *Ethics*, Part III, Proposition II, Scholium.

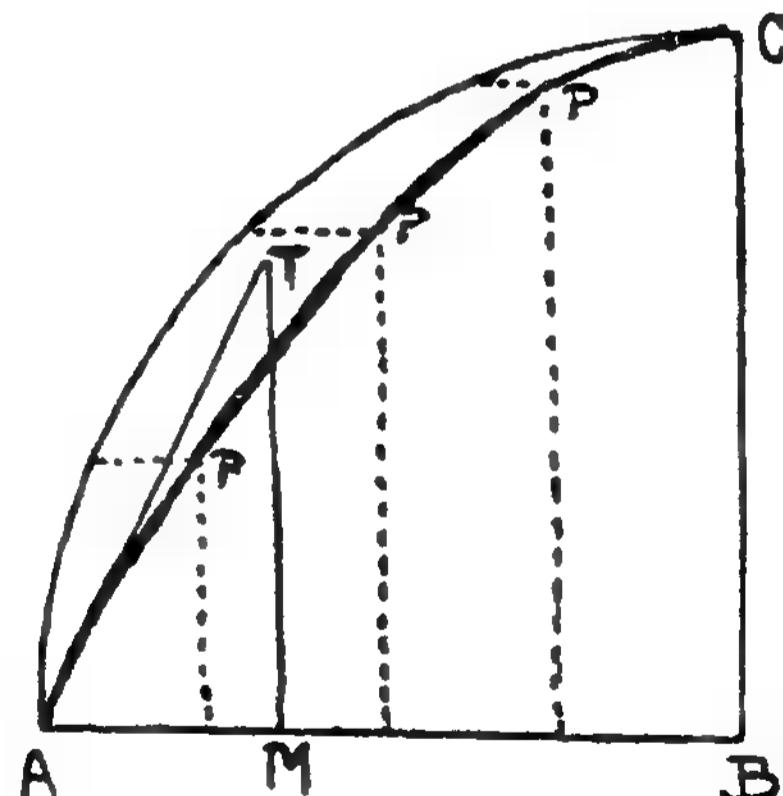
P. 296, l. 8. "They see the better and follow the worse." From Ovid's *Metamorphoses*, VII, 20. Spinoza cites it again in *Ethics*, III, Proposition II, Schol.

LETTER LIX

P. 298. This letter is only known from the *Posthumous Works*, the original letter, written in Latin, having been lost.

P. 300, l. 13. "Applies to curves . . . their Tangents." The oldest method of measuring the perimeters and the areas of curves was that of *exhaustion*. Polygons were inscribed and circumscribed to the curve, and an attempt was made to evaluate the perimeter or the area of these polygons as the number of their sides was increased until a limiting value could be determined. Next came the method of *applicates*, or of ordinates—that

is, right lines drawn across the curves so as to be bisected by their diameters. This method developed into co-ordinate Geometry. Tschirnhaus discovered the method of *tangents*. This method might be illustrated with special reference to a quadrant, say A B C. The arc A C and the radius A B are divided into the same number of equal parts, and lines are drawn through the points of division of the arc parallel



into the same number of equal parts, and lines are drawn through the points of division of the arc parallel

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to A B, and through the points of division of the radius parallel to B C. Corresponding lines of the two sets meet in points P lying on a curve A P C. The tangent A T drawn to this curve at A (where $x = 0$) has a slope $\pi/2$. If from any point on this tangent a perpendicular T M is drawn to the radius, then T M is the length of the quadrant of the circle which has A M for radius. Hence, when A M = A B, then T M = perimeter of the quadrant. From this we can infer the perimeter and the quadrature of the circle.

LETTER LX

P. 300. This letter also is only known from the *Posthumous Works*, the original letter, written in Latin, having been lost.

P. 301, l. 8. "The efficient cause of a circle," etc. On the importance of this passage see *Introduction*, § 8. The vast majority of critics have been so prone to suppose that Geometry, as they understand or misunderstand it, has determined Spinoza's Metaphysics, that they never even considered the possibility that Spinoza's dynamic Metaphysics may have influenced his geometrical conceptions.

P. 300, l. 28. Spinoza's emphasis on the *adequacy* of ideas, as distinguished from their *truth*, and his identification of the two, may present some difficulty. The main point is this. A strict empiricist might say that a *true* idea is one derived from observed instances with which it agrees. Its truth would thus consist, as Spinoza says, in the agreement of the idea with its objects. But Spinoza is a rationalist primarily. As to the mere empiricist, who pretends to obtain his ideas as inductions from experience solely, Spinoza asks: "How can he

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possibly be sure that his experience of a few particulars can serve him as a rule for all?" (*Short Treatise*, Book II, Chapter I, p. 68). Spinoza thinks of ideas as originating in thought (not as merely impressed on us by experience) and applied to the facts of experience in order to comprehend their interconnections. An idea is *adequate* in so far as it really does enable us to unify and interconnect a certain range of observations; and if it is adequate it is also *true* because it then agrees with the observed facts. But for Spinoza the primacy is with the *adequacy* of the idea, because until we have the adequate idea the facts are not yet apprehended in such a way that the idea can be said to agree with them, that is, to be true. Spinoza's view of ideas anticipates to some extent the Kantian way of looking at thought. Although the two philosophies, the Spinozistic and the Kantian, are otherwise very different, Spinozism is very far from being so "uncritical" as Kant and others supposed. Epistemological criticism has its place in Spinozism, but is deliberately, and I think rightly, regarded as of secondary interest only. See the Annotations to Letter II (on "things of reason").

P. 301, l. 14. "When I define God as the supremely perfect Being," etc. Spinoza's objection to this usual, Cartesian definition of God is due to the fact that it makes God merely a member in a series of more or less similar objects, whereas a good definition of anything should be causal or dynamic, and the correct conception of God is that of the unconditioned ground of the existence of the whole series of objects and events. Compare Annotation to Letter XII (on "Rab Chasdai").

P. 301, l. 24. "Applies to curves." See Annotations to Letter LIX.

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LETTER LXI

P. 302. This letter is only known from the *Posthumous Works*, the original, written in Latin, having been lost. The date given in the *Opera Posthuma* is October 8, 1665; in the Dutch edition it is given correctly as June 8, 1675.

P. 302, l. 16. "My letter." There is no trace of this letter of Oldenburg's to Spinoza, written presumably in 1670, the year of publication of the *Tractatus Theologico-Politicus*, or later. Evidently Spinoza sent a copy to Oldenburg, which did not reach him, and possibly also a note which did, otherwise how did Oldenburg know that Spinoza had sent him a copy of the *Tractatus*, unless perhaps through some third person.

LETTER LXII

P. 303. This letter, too, is only known from the *Posthumous Works*, the original, written in Latin, having been lost.

P. 303, l. 25. "Your answer to me, dated 5 July." This letter cannot be traced.

P. 303, l. 26. "Your Five-Part Treatise," namely, the *Ethics*. See Annotations to Letter XXVIII.

P. 303, l. 33. Oldenburg had learned to be cautious and wary since he wrote Letters VII and XI, in which he urged Spinoza to publish his philosophical ideas in spite of the theologians, etc.

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LETTER LXIII

P. 304. The original letter, written in Latin, is preserved in the Library of the United Baptists in Amsterdam. The *Opera Posthuma* contains an abridged and somewhat altered version of it. The complete text was first published by Van Vloten in his *Ad Benedicti de Spinoza Opera Supplementum* (1860).

P. 304, l. 30. Tschirnhaus visited London in April or May 1675, and there came into touch with various members of the Royal Society. That Oldenburg and Boyle should have formed "a strange conception" of Spinoza after reading his *Tractatus Theologico-Politicus* was to be expected, in view of their conventional orthodoxy. It is almost surprising that Tschirnhaus succeeded in disabusing their minds to the extent to which he did.

P. 305, l. 10. "As many worlds as there are Attributes of God." It is a common objection to Spinozism, or a common misinterpretation of it, that by describing each Attribute as being in itself, and being conceived through itself, it makes each Attribute really a substance, and so Spinozism is in effect a pluralistic philosophy in spite of Spinoza's intention and endeavour to make it monistic. The view was first expressed by Tschirnhaus in this very letter (which is mainly Schuller's copy of Tschirnhaus's letter), and has been repeated ever since. But it is a grave misconception all the same. It overlooks the fact that for Spinoza Substance was not merely the sum of distinct Attributes, but the organic unity of them. Just as each Attribute is not merely the sum of its modes, but the organic or systematic unity of them, so Substance, according to Spinoza, is the interconnected system of Attributes—interconnected just in so far as they are the forces or the expressions of the same and

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only Substance. The habit of speaking about the psycho-physical *parallelism* (which is usually but not quite correctly identified with Spinoza's conception of the relation between Thought and Extension), and the tendency to read Cartesianism into Spinozism are mainly responsible for the pluralistic misinterpretation of Spinozism. A plurality of Attributes is a very different thing from a plurality of Substances, and it is at once the most characteristic feature and a lasting merit of Spinozism that it holds tenaciously to the idea of the unity of the Unconditioned Ground and System of the Universe. In it, as in no other philosophy, the Universe really is a Universe—the All is One, and the One is All. In his reply Spinoza refers to *Ethics*, Part II, Proposition VII. Compare also his reply to Oldenburg, in Letter IV.

P. 306, l. 14. "In obedience to your instructions I dared not inform you of this." Of what? Presumably the reference is to the changed views of Boyle and Oldenburg about the *Tractatus Theologico-Politicus*. It is probable that Spinoza had requested his friends not to mention, or in any way betray, in their letters his authorship of the *Tractatus*. For this there were good reasons. And so Schuller had not dared to mention the news until a specially favourable opportunity presented itself of transmitting a letter without risk of its being tampered with.

P. 306, l. 22. "Mr. a. Gent." It is not known who this was.

P. 306, l. 22. "J. Riew." is most probably Jan Rieuwertsz. See Annotations to Letter LVIII.

LETTER LXIV

P. 306. This letter is only known from the *Posthumous Works*, the original letter, written in Latin, having been lost.

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P. 306, l. 31. "In reply to the first," etc. The question raised by Tschirnhaus about the number of Attributes expressed in each finite mode is closely connected with the question of the number of the Attributes of God or Substance. On the one hand, Spinoza usually speaks of their "infinite" number; on the other hand, he never speaks definitely of more than two, namely, Extension and Thought. Since for Spinoza "infinite" means "complete," it is possible that he did not seriously contemplate the reality of more than the two Attributes in question, although, of course, he had to leave open the possibility of other Attributes, since, according to Spinoza, man is certainly not the measure of reality. Commentators invariably speak of the "innumerable" Attributes of Substance according to Spinoza, and, of course, two cannot be equated with "innumerable." But Spinoza does not speak of "innumerable," only of "infinite" (i.e. the complete number or totality of) Attributes, and "two" may well be the complete or total number of them. If there were no more than two Attributes, then the problem raised by Tschirnhaus would not arise. But even the *possibility* of there being more Attributes than two, occasions the question why man is not aware of more than two of them. And Spinoza's answer is presumably suggested by the case of human experience, which shows us a mode of Thought conjoined with the mode of one other Attribute as its object. But difficulties have been urged against Spinoza's solution on the ground that it appears to give a privileged position to the Attribute Thought, which thus seems to be much more extensive than the other Attributes, inasmuch as it is coextensive, or parallel, not with *one* other Attribute only (say, Extension), but with *all* the other Attributes, since each mode of *every* other Attribute has its mode of Thought (see Letter LXX). This criticism, however, is based on an

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irrelevant spatial metaphor or analogy. Each Attribute is "infinite" (that is, complete) of its kind, and since each Attribute is entirely different from every other, there is no sense in comparing the "extensiveness" of one with that of another, whatever that may mean. (See A. Wolf: *Spinoza's Conception of the Attributes of Substance*, in *Proceedings of the Aristotelian Society*, 1927.)

P. 307, l. 36. "Whether . . . there must be constituted as many worlds as there are attributes." See Annotations to Letter LXIII.

P. 308, l. 21. "The idea which we have of an absolutely infinite Being. . . ." Spinoza may have suspected that Tschirnhaus was under the impression that the idea in question was regarded by Spinoza after the analogy of a "limiting case" in mathematics. There are beings with two attributes, three attributes, etc. So in the limit we can conceive a Being with infinite Attributes. But Spinoza was not thinking numerically in this case. As already explained, "infinite" meant for him "complete," "perfect" or "real in the highest sense." And he arrived at the conception of a substance having infinite Attributes, because such a Being was felt by him to be necessary as the Unconditioned Ground of all that is real but conditioned (or dependent).

P. 308, l. 24. "The examples" required were those of (a) an immediate infinite mode, and (b) a mediate infinite mode. Spinoza adduces "absolutely infinite understanding" as an instance of (a) in the Attribute Thought, and "motion and rest" as an instance of (a) in the Attribute Extension. Of (b) he only gives one instance, namely, "the face of the whole Universe" in the Attribute Extension.

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LETTER LXV

P. 309. This letter is only known from the *Posthumous Works*, the original, written in Latin, having been lost.

LETTER LXVI

P. 310. This letter also is only known from the *Posthumous Works*, the original, written in Latin, having been lost.

LETTER LXVII

P. 310. Also this letter is only known from the *Posthumous Works*, the original letter, written in Latin, having been lost.

Concerning Burgh see *Introduction*, §§ 1 and 5.

P. 311, l. 5. "Mr. D. Craenen." See Annotations to Letter XLIV (on Professor Kranen).

P. 312, l. 5. "Your book," that is the *Tractatus Theologico-Politicus*.

P. 315, l. 20. "The stone which the Alchemists seek." The so-called "Philosopher's Stone," which would help to transmute base metals into gold.

P. 317, l. 1. "The consensus of so many myriads of men." On the argument from the *consensus gentium* see Annotations to Letter IV (on "Common Notions").

P. 321, l. 2. "The very Way, the Truth and the Life." *St. John*, Chapter XIV, verse 6.

P. 324, l. 22. Concerning the approximate coincidence of this letter with that of Steno see Annotations to Letter LXVIIA.

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LETTER LXVIIA

P. 324. This letter was printed, in Florence, in 1675. The original letter cannot be traced. There is no evidence that it ever reached Spinoza, and no reply from him is extant. Spinoza's name is not mentioned, nor is any one of his books referred to by its title. Yet there can be little doubt that it was addressed to Spinoza. The description of the addressee, "the reformer of the new philosophy," is hardly applicable to anybody else at that time. "The Book" to which Steno refers is obviously the *Tractatus Theologico-Politicus*, which by 1675 was well known in all centres of learning throughout Europe. Moreover, Spinoza makes explicit mention of Steno in his reply to Burgh (see Letter LXXVI), and mentions him in such a way as can leave no doubt that it is the same Steno who wrote this letter. Spinoza also possessed a copy of Steno's *Prodromus de Solido* (1669), presumably a gift from his old friend, the author. (See J. Freudenthal's *Die Lebensgeschichte Spinoza's*, p. 161.)

The fact that both Burgh and Steno wrote to Spinoza from Florence, in the same year, perhaps about the same time, and to the same purpose, may have some significance. It may be a mere coincidence, but more likely it was the result of mutual agreement, or of a suggestion made to both by some Roman Catholic authority.

In spite of general similarity of contents, the two letters are markedly different in tone. Burgh becomes ill-mannered, as well as stupid, in his fanaticism, whereas Steno remains the friendly scholar and gentleman.

The first edition of this letter is very scarce, but it has been reproduced in facsimile and edited by W. Meyer in the *Chronicon Spinozanum*, Vol. I (The Hague, 1921).

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P. 324, l. 26. "The book," namely the *Tractatus Theologico-Politicus*.

P. 326, l. 34. "The Spirit of Christ preventing." *Preventing* is, of course, used here in its original meaning of "coming or going before," not in the sense of hindering. Compare *Psalm XCV*, 2: *Let us prevent his face with thanksgiving* (Marginal Version).

P. 327, l. 21. "For their wickedness blinded them." *The Wisdom of Solomon*, Chapter II, verse 21.

P. 327, l. 24. "Let the dead bury their dead." *St. Matthew*, Chapter VIII, verse 22 (*Leave the dead to bury their own dead*).

P. 329, l. 5. "Thy testimonies are very sure." *Psalm XCIII*, verse 5.

P. 331, l. 17. "This is the finger of God." *Exodus*, Chapter VIII, verse 19.

P. 333, l. 3. St. Justin: *Dialogue with Trypho*, Chapter VII. The quotation is not quite accurate.

P. 333, l. 27. St. Justin: *Dialogue with Trypho*, Chapter VIII. The quotation is not quite accurate.

LETTER LXVIII

P. 334. This letter is only known from the *Posthumous Works*, the original letter, written in Latin, having been lost.

P. 334, l. 16. "The work about which I had written to you," that is the *Ethics*. See Letter LXII and the Annotations to it.

P. 334, l. 21. "Certain Theologians," etc. Of the fanaticism of the Dutch theologians and churches in relation to Spinoza there is ample evidence. J. Freudenthal has printed a considerable number of amiable resolutions passed by various Church councils and synods throughout Holland from the year in which

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the *Tractatus Theologico-Politicus* appeared (1670) until 1676 (*Die Lebensgeschichte Spinoza's*, pp. 121-154). He has also adduced evidence of what was happening at the time of this letter of complaint (see his *Spinoza*, vol. I, pp. 238 ff.). And no sooner did the *Posthumous Works* appear than these good Christians resumed their amiable occupation (see *Die Lebensgeschichte Spinoza's*, pp. 169-189).

P. 334, l. 23. "The Prince," that is the Prince of Orange, who owed much to the clerical zealots who had helped to bring about the downfall of the De Witts and their more liberal regime.

P. 335, l. 12. Notes to the *Tractatus Theologico-Politicus* were added by Spinoza with his own hand in some copies of this work. These notes were first published in the French translation of the *Tractatus*, 1678. The original notes, in Latin, were first published, in 1802, by C. T. de Murr—*Benedicti de Spinoza Adnotationes ad Tractatum Theologico-Politicum*. This was printed from a copy of the *Tractatus* (once in the possession of J. Rieuwertsz, the publisher) which contained the notes in Spinoza's own writing. Another copy of the *Tractatus* with these notes in Spinoza's handwriting is in Königsberg.

LETTER LXIX

P. 335. This letter was not included in the *Posthumous Works*. The original letter, written in Latin, somehow came into the possession of Professor H. W. Tydeman (1778-1863), of Leyden, who announced the fact in 1842, and published the letter, together with a lithographic facsimile of it, in 1844, in the *Utrechtsche Volks-Almanak* for that year. In 1865 the original was sold at the sale of Tydeman's books, but it cannot be

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traced now. A copy of the facsimile is contained in W. Meyer's edition (1903).

Concerning Velthuysen, see *Introduction*, § 7.

P. 335, l. 20. "Nieuwstad." Joachim Nieuwstad was Secretary of the city Utrecht from 1662 till 1674. According to K. O. Meinsma (*Spinoza en zijn Kring*, 1896, p. 376) Spinoza must have visited Nieuwstad during his stay in the French camp in Utrecht in 1673.

P. 335, l. 24. "Manuscript," that is Velthuysen's letter to Ostens. See Letter XLII.

P. 335, l. 30. Notes to the *Tractatus Theologico-Politicus*. See Annotations to Letter LXVIII.

P. 336, l. 16. "I know that you are possessed only by the love of truth," etc. Spinoza had evidently entirely changed his view of Velthuysen since he wrote Letter XLIII. This was the result of personal acquaintance with him during Spinoza's stay in Utrecht in 1673. Velthuysen, in the Preface to his own Works (published in 1680), relates that he had many conversations with Spinoza. Whether Velthuysen gave Spinoza the permission asked for, is not known. In any case Spinoza had no opportunity of preparing an enlarged edition of the *Tractatus Theologico-Politicus*.

LETTER LXX

P. 336. This letter is not contained in the *Posthumous Works*. The original letter, written in Latin, is in the possession of the Orphanage of the United Baptists in Amsterdam, and was first published by Van Vloten in his *Ad Benedicti de Spinoza Opera Supplementum* (1860).

P. 337, l. 27. "Mr. Colbert," that is Jean Baptiste Colbert, Chancellor of the Exchequer under Louis XIV. See Annotations to Letter XXXI.

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P. 338, l. 17. "The Attribute Thought is much more extensive than the other Attributes." See Annotations to Letter LXIV.

P. 338, l. 29. Leibniz stayed in Paris from 1672 till 1676 in order to try to persuade Louis XIV to turn his attention to Egypt, and to leave Europe in peace. See *Introduction*, § 5.

P. 339, l. 12. "Leibniz . . . the *Tractatus Theologico-Politicus*." Leibniz was a diplomat, and so acquired the habit of professing whatever views were likely to suit his interlocutors. When addressing orthodox people Leibniz described the same *Tractatus* as "intolerably impudent" and "shocking," or "monstrous" (see his *Philosophische Schriften*, edition 1875, Vol. I, pp. 16, 34, 39, 70).

P. 339, l. 14. A letter on this subject. This letter of Leibniz to Spinoza on the subject of the *Tractatus Theologico-Politicus* cannot be traced.

P. 339, l. 24. "Mr. Bresser." Who this was is not known.

LETTER LXXI

P. 340. This letter is only known from the *Posthumous Works*, the original letter, written in Latin, having been lost.

P. 340, l. 21. To judge from this naïve letter, Oldenburg must have been under the impression that Spinoza had left orthodox Judaism because it did not prescribe a sufficiently large number of articles of faith. What he wanted Spinoza to do was simply to explain away his philosophy, and to show what a good conventional Christian he really was!

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LETTER LXXII

P. 340. This letter was not printed in the *Posthumous Works*, but the original was found in the collection of autograph letters owned by J. J. van Voorst, and was published soon afterwards in Van Vloten's *Ad Benedicti de Spinoza Opera Supplementum* (1860). The original letter has appeared at various sales, and has changed hands several times since then. It is believed still to be in existence, but the name of its present owner has not been divulged. A facsimile of it is included in W. Meyer's edition (1903).

P. 341, l. 32. "I should like to know first what he is doing in France." Concerning Spinoza's suspicion of Leibniz, see *Introduction*, §§.

P. 342, l. 11. "Gold . . . latent in the antimony." The normal amount would be imperceptible.

LETTER LXXIII

P. 342. This letter is printed in the *Posthumous Works*. The original letter, written in Latin, has been lost; but a copy of it made by Leibniz (and with notes by him) is in the Library at Hanover. The Heidelberg edition of Spinoza's Works (1926) gives both texts. The differences are of no great importance.

P. 343, l. 9. "Like Paul," namely, in *Acts*, Chapter XVII, verse 28: *For in him we live, and move, and have our being.*

P. 343, l. 17. "Nature" for Spinoza is identical with God or Substance. The common use of the term for the *material* world only was a constant source of misunderstanding among his early readers and critics.

P. 343, l. 23. "Miracles" for Spinoza spell ignorance.

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For miracles are alleged to be supernatural interferences with the order of Nature. For Spinoza there is nothing outside Nature or the Universe, and so there is nothing *Super-natural*. Moreover, Nature is thoroughly nomistic or orderly. The so-called miraculous, or the alleged supernatural interference with Nature, and the so-called "accidental" or contingent (that is mere chance occurrences) are simply the result of our failure, through ignorance, to place certain phenomena (in so far as they are real and not merely imaginary) in their proper place in the order of Nature. Spinoza protests against the tendency of the Churches to base their claims on miracles instead of on "the fruits of the Holy Spirit." The tendency, moreover, encourages obtuseness to the wonders of the natural and the orderly. Lessing, a great admirer of Spinoza, and himself a great genius, saw in this proneness to miracles and miraculous deliverances not only an expression of ignorance, but also an expression of conceit and pride. In his dramatic poem *Nathan the Wise*, one of the greatest gospels of eighteenth-century Humanism, he said *apropos* of a claim to a miraculous deliverance from fire :

"Pride ! and nought but pride ! The pot
Of iron would feign be lifted from the fire
With tongs of silver, just to deem itself
A pot of precious silver."

(Act I, Scene 2.)

It is the same conceit which at once inclines the Churches to lay stress on miracles, and makes them centres of sectarian friction instead of gardens for "the fruits of the Holy Spirit."

P. 343, l. 35. "Whether kings will ever allow. . . ." Spinoza was too good a republican to repose great faith in autocratic monarchs. The intrigues of the Prince of

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Orange with the fanatical Calvinist preachers were not at all encouraging in this respect.

P. 343, l. 13. "The ancient Hebrews." Spinoza was thinking, no doubt, of the many passages in the Old Testament in which God's omnipresence is emphasized, and especially, perhaps, of what may be called the nature-poetry of the Bible.

LETTER LXXIV

P. 344. This letter is only known from the *Posthumous Works*, the original letter, written in Latin, having been lost.

P. 345, l. 10. "If we are driven by Fate," etc. Allusion to Seneca's *Œdipus*, 980, 986 f. Oldenburg cannot grasp Spinoza's distinction between Necessity and Coercion. See Annotations to Letter LVI.

P. 346, l. 4. "*The Word became flesh.*" *St. John*, Chapter I, verse 14. "*The Son of God took not on him the nature of angels. . . .*" See *Hebrews*, Chapter II, verse 16.

P. 346, l. 7. "The only-begotten Son of God . . . paid the ransom for us sinners. . . ." See *I Timothy*, Chapter II, verses 5, 6; and *St. Matthew*, Chapter XX, verse 27.

LETTER LXXV

P. 346. This letter was included in the *Posthumous Works*. The original letter, written in Latin, has been lost; but a copy of it made by Leibniz (and with notes by him) is preserved in the Library at Hanover. The Heidelberg edition of Spinoza's Works (1926) prints both texts. The differences are of no great importance.

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P. 347, l. 10. "This inevitable necessity of things," etc. This paragraph is repeated from Letter XLIII, fifth paragraph. J. Martineau (*A Study of Spinoza*, 1882, p. 98) held that Letter XLIII was written after this letter, in 1675. But a comparison of Letters XLIII and LXIX shows a radical change in Spinoza's views about Velthuysen. Letter XLIII must therefore have been written before Letter LXIX, and therefore before Letter LXXV. Moreover, there is no reason whatever for supposing that Spinoza waited four years or more before replying to the Letter (XLII) which Velthuysen wrote to Ostens in January 1671, and which Ostens presumably forwarded to Spinoza with little, if any, delay.

P. 347, l. 26. "As clay in the hand of the potter." See *Romans*, Chapter IX, verses 20, 21, also Hebrew Liturgy.

P. 348, l. 18. "God appeared unto Abraham, when he saw three men. . . ." See *Genesis*, Chapter XVIII, verses 1 ff.

P. 348, l. 36. "*Leave the dead to bury their own dead.*" *St. Matthew*, Chapter VIII, verse 22; *St. Luke*, Chapter IX, verse 60.

LETTER LXXVI

P. 350. This letter is contained in the *Posthumous Works*. The original letter, written in Latin, has not been preserved. At least it cannot be traced. But there exists a copy of it made by Leibniz himself, and having notes on it written by him. This copy is in the former Royal Library at Hanover. The Heidelberg edition of Spinoza's Works (1926) gives both texts. The differences in the two texts are not important.

Concerning Burgh, see *Introduction*, § 5.

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P. 350, l. 20. Concerning Steno, see *Introduction*, § 7, Letter LXVIIA, and the Annotations to it.

P. 351, l. 19. *I John*, Chapter IV, verse 13. Spinoza put this verse as a motto on the very title-page of his *Tractatus Theologico-Politicus*.

P. 351, l. 23. "As I said with John," namely, in the *Tractatus Theologico-Politicus*, Chapter XIV. The reference is to *I John*, Chapter IV, verses 7 and 8 : *Love is of God; and every one that loveth is begotten of God, and knoweth God. He that loveth not knoweth not God; for God is love.*

P. 352, l. 13. "Not one whom Chastillon in the town of Tienen . . . gave with impunity to the horses to eat." This seems to refer to an unsavoury incident which occurred in May 1635 when a Franco-Dutch army attacked the Spanish army in Tienen (or Tirlemont), Belgium. The French general Gaspard de Coligny, Maréchal de Châtillon, was a Huguenot, and when the town was sacked he appears to have had the "hosts" thrown to the horses, as an expression of his disgust with what he regarded as Catholic idolatry.

P. 352, l. 25. "Not . . . the best Philosophy, but . . . the true one." What Spinoza claims is that his philosophy is true as far as it goes, although it is not the whole truth ("the best"). This claim must not be interpreted in a spirit of conceit. It must be remembered that for Spinoza the *true* idea is primarily the *adequate* idea (see the Annotations to Letter LX), and the adequate idea is that which helps one to grasp the interconnectedness of the facts to which it is applied. And Spinoza had a perfect right to say, and to say in all modesty, whether his ideas or his philosophy had this adequacy for him.

P. 352, l. 33. "The true reveals itself and the false." The ultimate test of knowledge is more knowledge, or the coherence of all that is known; and the false is

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betrayed by its incoherence or disharmony with what is already known.

P. 353, l. 16. "The Pharisees." Spinoza uses this term to designate and to condemn also the post-Talmudic exponents of an over-ritualistic Judaism. This use of the term appears to have been introduced by Gabriel da Costa, commonly known as Uriel Acosta. Da Costa was born in Portugal in 1585, of Marrano parents, escaped to Holland about 1618 in order to live as a Jew, but came into conflict with the Jewish authorities, was twice excommunicated, and eventually committed suicide in 1640. In his revolt against the narrow Judaism of the Amsterdam Rabbinical authorities, and in his excommunication, as well as in certain other respects, Da Costa was a forerunner of Spinoza, who had probably seen him when he was still a little boy, and who no doubt remembered the time when Da Costa shot himself. The bitterness with which Spinoza speaks of "the Pharisees," especially in his *Tractatus Theologico-Politicus*, is to be explained by reference to his experiences with Amsterdam Jewish orthodoxy. He speaks more respectfully of "the ancient Hebrews," and even indicates his intellectual kinship with them (Letter LXXIII). By "the ancient Hebrews" he meant chiefly the Prophets and the Psalmists. And it is noteworthy that nearly all Jewish "Reform" movements in modern times profess to go "back to the Prophets and the Psalmists." Incidentally it may be pointed out that "the Pharisees" have really been much maligned (see R. Travers Herford: *The Pharisees*).

P. 354, l. 3. "Judah . . . the Faithful." The tragedy referred to appears to have occurred in Valladolid (Spain), on July 25, 1644. The victim was Don Lope de Vera y Alarcon, of San Clementi. By birth he was a Christian nobleman. But the study of Hebrew literature led him to embrace Judaism, and he adopted

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the name *Juda el fido*. He was imprisoned by the Inquisition, and eventually burned at the stake. An account of these events is contained in Manasseh ben Israel's *Esperanza de Israel* (The Hope of Israel), which was published in 1650, and was dedicated to the Wardens of the Amsterdam Synagogue when Spinoza's father was one of its Wardens. Spinoza had a copy of the book in his library, as we know from the official inventory of his estate. According to Manasseh ben Israel, "Judah the Faithful" suffered martyrdom in 1649 (not in 1644), and was twenty-five years old at the time.

P. 354, l. 6. "To thee, O God, I commit my soul." *Psalm XXXI*, verse 5 : *Into thine hand I commend my spirit.*

P. 354, l. 12. "The Mohammedan Church. . . ." Spinoza was, of course, mistaken in supposing that there were no sects in Islam.

LETTER LXXVII

P. 355. This letter is only known from the *Posthumous Works*, the original letter, written in Latin, having been lost.

P. 355, l. 30. $\epsilon\hat{\nu}$ $\pi\rho\alpha\tau\tau\epsilon\nu$ means "to prosper" or "do well," and is used as a greeting, like *Vale*.

P. 356, l. 14. Oldenburg, like Blyenbergh, of course, cannot escape from the traditional way of regarding human life as a drama of deserts and retributions. For Spinoza's view see Letters XIX, XXI, XXIII, and the Annotations to them, also Letter LXXVIII.

LETTER LXXVIII

P. 357. This letter is included in the *Posthumous Works*. The original letter, written in Latin, has not been preserved. But there is a copy of it made by

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Leibniz (with his notes on it) in the Library at Hanover. Both texts are printed in the Heidelberg edition of Spinoza's Works (1926). The differences are not important.

P. 357, l. 19. "My previous letter," namely, Letter LXXV.

P. 357, l. 27. "Stone," that is, gall-stone.

P. 359, l. 15. "The Catalogue of the books of the Noble Mr. Boyle." Already in 1665 Oldenburg appears to have begun the compilation of a chronological list of Boyle's works (see *The Works of Robert Boyle*, edition 1772, Vol. VI, p. 68). In 1677 Oldenburg published such a catalogue in the *Philosophical Transactions* of the Royal Society (No. CXXX, pp. 766 f.). Presumably Oldenburg had sent Spinoza an advance copy of this catalogue.

LETTER LXXIX

P. 359. This letter is not printed in the *Posthumous Works*. Nor is the original letter, written in Latin, preserved. But there is an old copy of it (apparently intended for the printers of the *Opera Posthuma*, but not used) in the possession of the Orphanage of the United Baptists in Amsterdam. It was first published by Van Vloten in his *Ad Benedicti de Spinoza Opera Supplementum* (1860).

P. 360, l. 31. "Miracles and ignorance." See Annotations to Letter LXXIII. Oldenburg does not see the difference between failing to see the precise place of an event in the order of Nature while believing that it has such a place, and turning such ignorance into a ground for regarding the event in question as miraculous or supernatural.

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CORRESPONDENCE OF SPINOZA

This letter closes the extant correspondence between Oldenburg and Spinoza. As a matter of fact, Oldenburg wrote again to Spinoza in October 1676, and entrusted the letter to Leibniz for transmission. But for some reason or other this letter was never delivered. In a letter written on the very day after Spinoza's death, Oldenburg informed Leibniz of his surprise at the non-delivery of his letter to Spinoza.

LETTER LXXX.

P. 361. This letter is only known from the *Posthumous Works*, the original letter, written in Latin, having been lost. The last paragraph of the letter is not contained in the Latin edition, only in the Dutch edition.

P. 361, l. 30. "Your letter on the Infinite," that is, Letter XII.

P. 361, l. 31. "But they do not conclude. . . ." This is quoted from page 120, line 14.

P. 362, l. 13. Huet. Pierre Daniel Huet (1630-1721) was born in Caen. In 1651 he went to Paris. In 1652 he visited the Swedish Court, and various Universities, and discovered and edited some fragments of Origen's commentary on *St. Matthew*. In 1670 he was appointed assistant tutor to the Dauphin, and edited the "Delphin Classics." He was admitted to the Academy in 1674, took Holy Orders in 1676, and was created a Bishop in 1685. He was, of course, a defender of revealed religion against free philosophy. The book to which Leibniz referred is probably the *Demonstratio Evangelica*, which Huet published in 1679. Another book in which Huet attacked the *Tractatus Theologico-Politicus* is the one called *Quaestiones Aletnanae de Concordia Rationis et Fidei*, published in 1690.

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LETTER LXXXI

P. 362. This letter, originally written in Latin, is only known from the *Posthumous Works*, the original having been lost.

P. 362, l. 23. "In my letter on the Infinite," namely, Letter XII. The Dutch edition has "in my letter to L. M.," that is, to L. Meyer. The editors of the *Opera Posthuma* naturally wished to omit the name of the correspondent; but there seems to have been an oversight in the Dutch edition.

P. 363, l. 1. On the Cartesian and the Spinozistic conceptions of Extension see *Introduction*, § 8.

LETTER LXXXII

P. 363. This letter is only known from the *Posthumous Works*, the original letter, written in Latin, having been lost.

P. 363, l. 17. Tschirnhaus points out that Descartes did not explain natural or material phenomena by reference to Extension alone, but that he supposed that God had imparted motion to extension. Tschirnhaus does not seem to realize that such supernatural interference is entirely contrary to the strict Naturalism of Spinoza's philosophy. See *Introduction*, §§ 2 and 8.

P. 364, l. 19. "Proposition 16 of the *Ethics*" (Part I), namely, "From the necessity of the divine nature infinite things must follow in infinite ways (that is, all things which come within the infinite understanding)."

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LETTER LXXXIII

P. 365. This letter, too, is only known from the *Posthumous Works*, the original letter, written in Latin, having been lost. The Latin edition gives no signature at all. The signature given in the text is from the Dutch edition.

P. 365, l. 12. "If life lasts." Spinoza died seven months after writing this letter.

P. 365, l. 9. "Matter is badly defined by Descartes. . . ." See *Introduction*, §§ 2 and 8, on the difference between Spinoza's and Descartes' conception of Matter or Extension.

P. 365, l. 32. "What . . . has recently been discovered about Refraction." The allusion is probably to one or both of the following discoveries:—

(a) Newton discovered, about 1670, that the prism resolves a beam of white light into coloured beams of various refrangibilities. He communicated his discovery in a paper to Oldenburg, Secretary of the Royal Society, dated February 6, 1672, and the resulting discussion continued for some years.

(b) Erasmus Bartholinus, in his *Experimenta crystalli islandici disdiaclastici* (Copenhagen 1669), gives an account of his discovery of *double refraction*. A ray of light, upon passing into a crystal of Iceland spar, gives rise to two refracted rays, one having a direction given by Snell's law of refraction (discovered 1621), and the other obeying a more complicated law which was first correctly represented by Huygens in his *Traité de la Lumière* (composed 1678).

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LETTER LXXXIV

P. 366. This letter is contained in the *Posthumous Works*, but not among the Correspondence. It is given in lieu of a Preface to the *Political Treatise* printed in the same volume. The original letter cannot be traced, and it is not known to whom it was addressed. Nor is the precise date of it known. But it was probably written in the latter part of 1676. For the *Tractatus Politicus*, as Spinoza eventually left it, contained the chapter on Aristocratic Government, and part of the chapter on Democratic Government, which had not yet been written when Spinoza wrote this letter, as is evident from its concluding sentence. As Spinoza died on February 21, 1677, he must have written this letter still in 1676, to leave time for the above-mentioned additions.



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SUGGESTED EMENDATIONS

IN THE HEIDELBERG EDITION OF THE CORRESPONDENCE (SPINOZA, OPERA TOM. IV., 1926) AND IN THE TEXTS ON WHICH IT IS BASED.

Page 49 line 18 'illum' should be 'illam'.

Page 61 line 18 'Ghasdai' should probably be 'Chasdai'.

Page 75 line 12 'eandem' should be 'eadem'.

Page 76 line 17 'hanc' should be 'hunc'.

Page 77 line 21 'quae' should be 'qui'.

Page 79 line 13 'nie' should be 'niet'.

Page 81 line 2 'niet' should probably be inserted before 'soude'.

Page 83 line 13 The bracket should probably be inserted after 'aenmerckt' instead of after 'Ziel'.

Page 99 line 2 ', maer' should probably be '. Maer'.

Page 102 line 1 . after 'noemt' should be , .

Page 110 line 20 'evenveel' should probably be 'evenwel'.

Page 117 line 6 'sich' should be omitted.

Page 118 line 37 'ni' should be 'in'.

Page 120 line 13 'niet' might better be omitted.

Page 133 lines 9, 10 The bracket should be inserted after 'fecisse' instead of after 'contraria'.

Page 133 line 14 'sed non' should not be in italics.

Page 137 line 28 'tum' should probably be 'tam'.

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Page 153 lines 16-19 These lines have been displaced.

‘Vragen’ should be followed by ‘waer
in ick . . . hadden. Ick wenschte . . .
geven’.

Page 180 line 1 ‘hauc’ should be ‘hanc’.

Page 193 line 22 ‘te’ should be ‘de’.

Page 194 lines 1, 2 ‘quam’ should be ‘quem’.

Page 208 headline LXII should be XLII.

Page 216 line 15 ‘enarrataram’ should be ‘enarratarum’.

Page 218 line 27 ‘Turca’ should be ‘Turcae’.

Page 220 line 8 ‘si’ should be ‘sic’.

Page 274 line 16 The bracket should be inserted after
‘redit’ instead of after ‘literis’.

Page 286 line 19 ‘Amadiis’ should be ‘Amadis’.

Page 288 line 15 ? should be ; .

Page 295 line 25 ‘rato’ should be ‘raro’.

Page 305 line 32 ‘te’ should be perhaps ‘eum’.

Page 306 Heading ‘ad praecedentem’ should be ‘ad
Epistolam LXXII’.

Page 318 line 5 ‘omnium’ should probably be ‘omnia’.

Page 329 line 23 ‘προ . . .’ should be ‘προ . . .’.

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